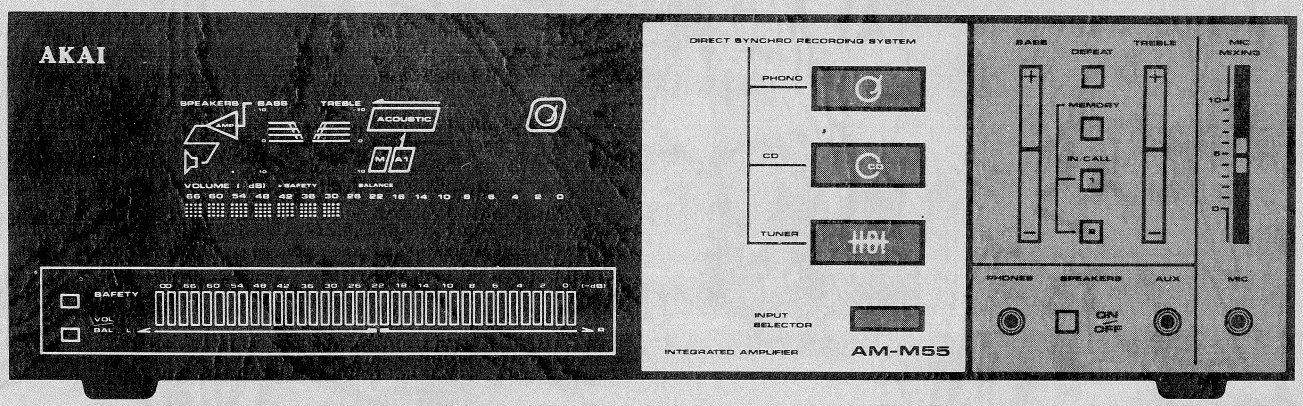
AM-M55

AKAI SERVICE MANUAL

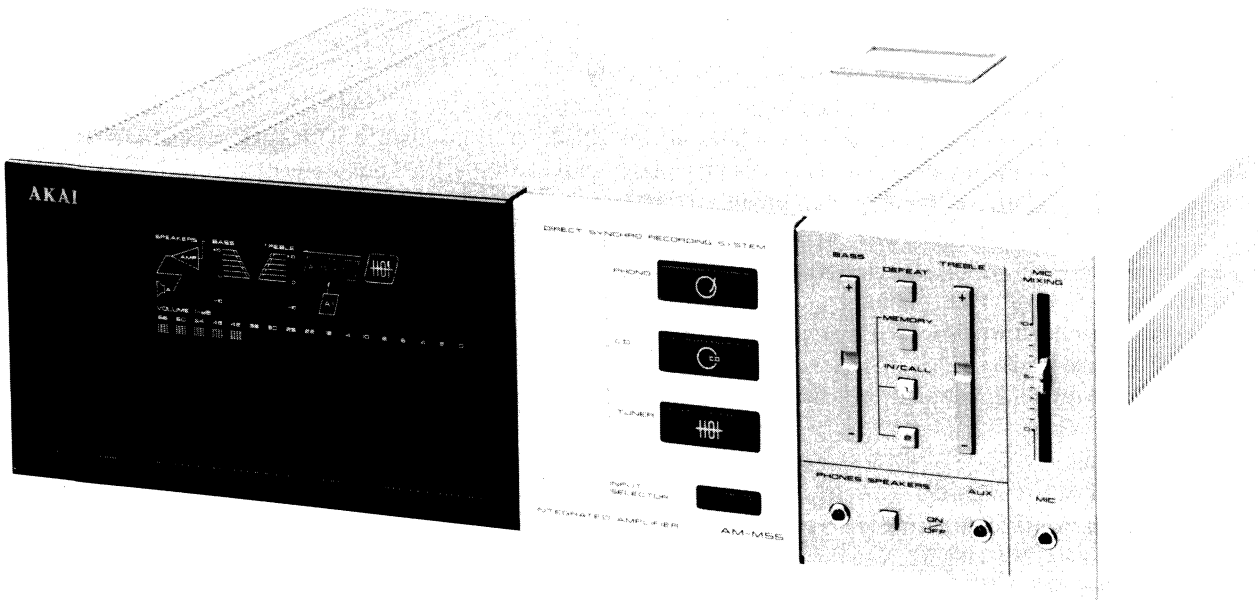


INTEGRATED AMPLIFIER

MODEL **AM-M55**

ABBREVIATIONS FOR SERVICE MANUAL
MODEL AM-M55

ABBREVIATIONS	EXPLANATION
AMP	AMPlifier
AC	Alternate Current
A/D	Analogue/Digital, (Analogue to Digital)
CD	Compact Disc (Player)
CK	Clock
D	Data
DC	Direct Current
EIAJ	Electronic Industries Association of Japan
FLD	Floresent Light Display
FTC	Federal Trade Commission
GND	GrouND
IHF	Institute of High Fidelity (Standard)
MIC	MICrophone
OP-AMP	OPerational-AMPlifier
PCB	Printed Circuit Board
REC	RECord
RIAA	Recording Industry Association of America
RST	ReSeT
SEG, S	SEGment
ST	STrob
SW	SWitch



INTEGRATED AMPLIFIER
MODEL AM-M55

THIS MANUAL IS APPLICABLE TO BOTH SILVER AND BLACK PANEL MODEL

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SECTION 2 PARTS LIST 11

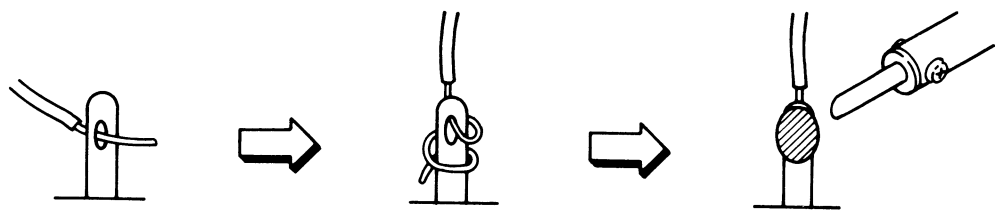
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



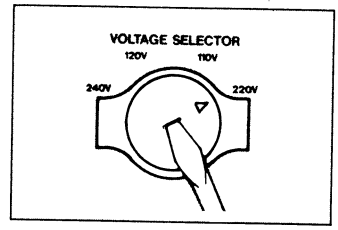
6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

VOLTAGE CONVERSION

Models for Japan, USA, Canada, Europe, UK and Australia are not equipped with this facility. Each machine is preset at the factory according to its destination, but some machines can be set to 110V, 120V, 220V or 240V as required.

If your machine's voltage can be converted:

1) Confierm the AC power cord is disconnected.
2) Turn the VOLTAGE SELECTOR located on the rear panel with a screwdriver until the correct voltage is indicated.



SYCLE CONVERSION

Sycle conversion is not necessary.

SECTION 1

SERVICE MANUAL

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I. SPECIFICATIONS 4
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2. CONTROL OVER ELECTRONIC POTENTIOMETERS (TS9154P AND TC9156P) 8
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For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I . SPECIFICATIONS

POWER AMPLIFIER SECTION

RATED OUTPUT POWER			
(2 channels driven)	8 ohms	6 ohms	4 ohms
20Hz to 20kHz	30W/0.05%	30W/0.08%	
1kHz (EIAJ)	45W/5%		50W/5%
OUTPUT POWER BY FTC			
(2 channels driven)			
20Hz to 20kHz	32W/0.05%	33W/0.08%	35W/0.08%
1kHz	35W/0.05%	36W/0.05%	38W/0.08%
FRENCH NORMAL			
63Hz to 12.5kHz	38W/0.7%		
1kHz	40W/0.7%		
MUSIC POWER (BOTH CHANNEL)	170W		
POWER BANDWIDTH (IHF-3dB, 8ohms)	5Hz to 40kHz (0.1%)		
S/N (IHF-A)			
PHONO	70dB		
CD	92dB		
TAPE	92dB		
MIC	63dB		
RESIDUAL NOISE (8ohms)	0.5mV		
CHANNEL SEPARATION (IHF, 1kHz)	50dB		
DAMPING FACTOR (1kHz, 8ohms)	30		
REQUIRED SPEAKER IMPEDANCE	4 to 16 ohms (J, U Models)		
	6 to 16 ohms (Others)		

PRE AMPLIFIER SECTION

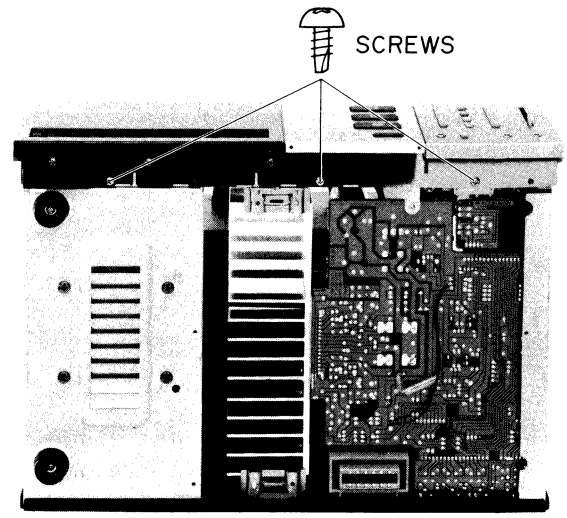
INPUT SENSITIVITY/IMPEDANCE	
PHONO	2.5mV/47kohms
CD	150mV/47kohms
MIC	0.7mV/10kohms
OUTPUT LEVEL/IMPEDANCE	
TAPE REC	150mV/1.5kohms
FREQUENCY RESPONSE	
PHONO (RIAA DEVIATION)	20Hz to 20kHz, ±0.5dB
AUX	5Hz to 80kHz, +0dB, −3dB
TONE CONTROL	
BASS	±8dB/100Hz
TREBLE	±8dB/10kHz
POWER REQUIREMENTS	100V, 50/60Hz for Japan
	120V, 60Hz for USA & Canada
	220V, 50Hz for Europe except UK
	240V, 50Hz for UK & Australia
	110V/120V/220V/240V, 50/60Hz switchable for other countries
POWER CONSUMPTION	150W (A, C Models)
	100W (J Model)
	140W (U Model)
DIMENSIONS	350 (W) × 140 (H) × 255 (D)mm
	(13.8 × 4.1 × 10 inches)
WEIGHT	5.1kg (11.2 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

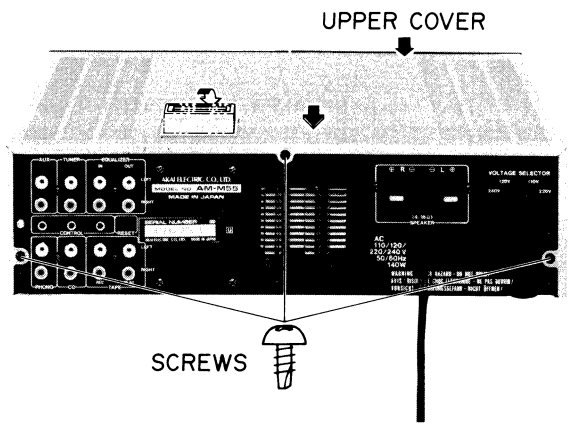
II. DISMANTRING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

3



1



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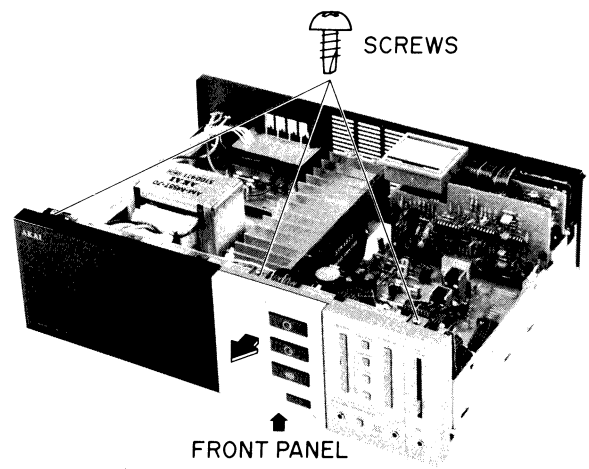

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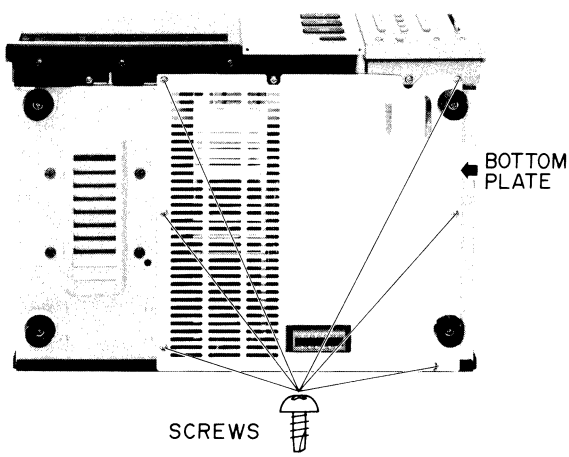

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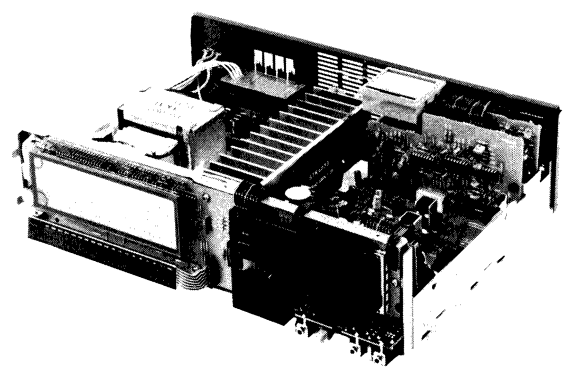


III. CONTROLS

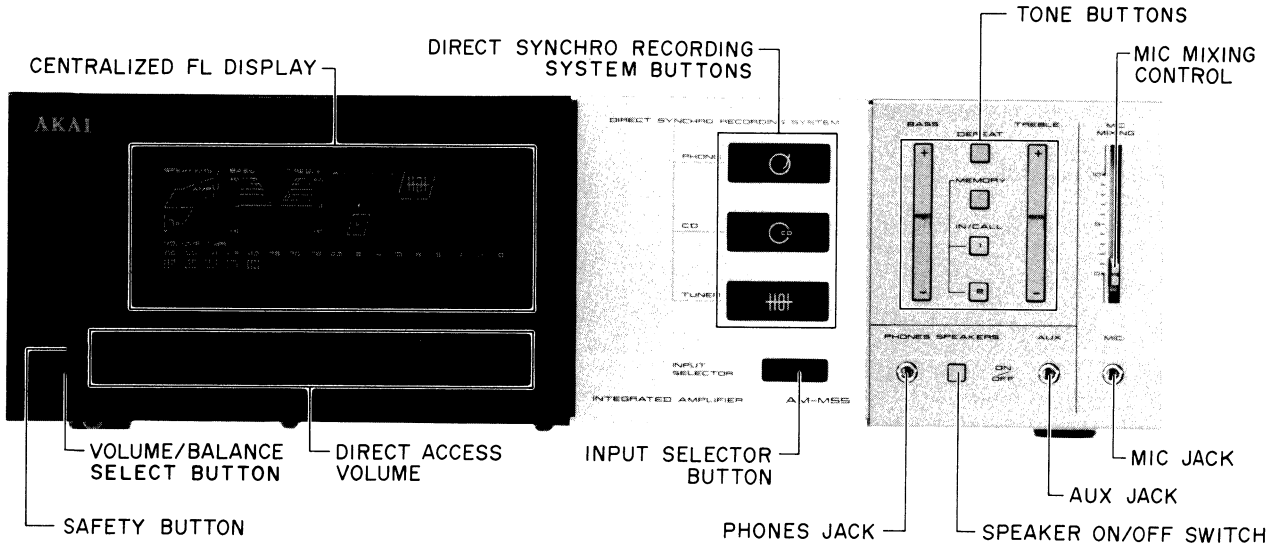


Fig. 3-1 Front View

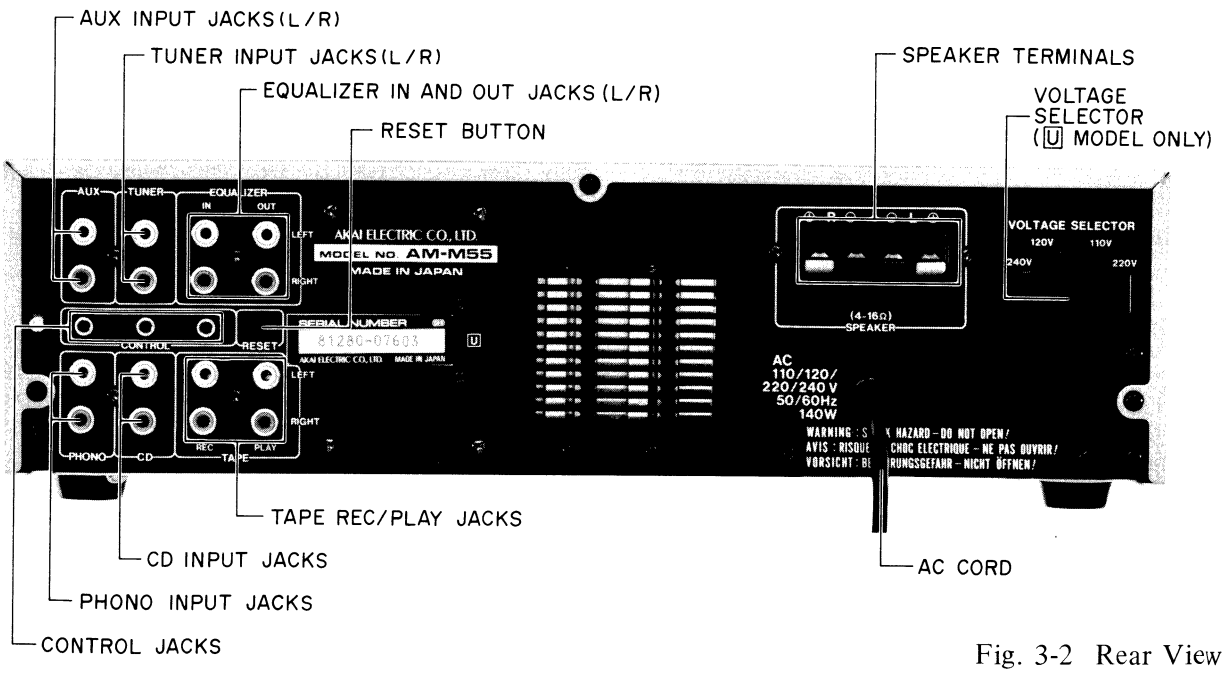


Fig. 3-2 Rear View

IV. PRINCIPAL PARTS LOCATION

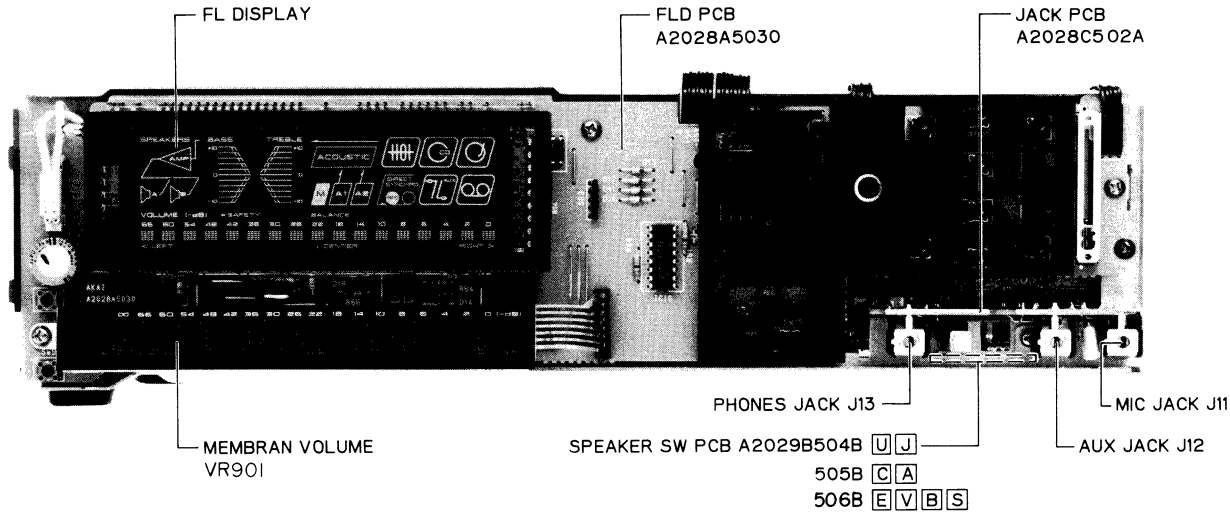


Fig. 4-1 Front View

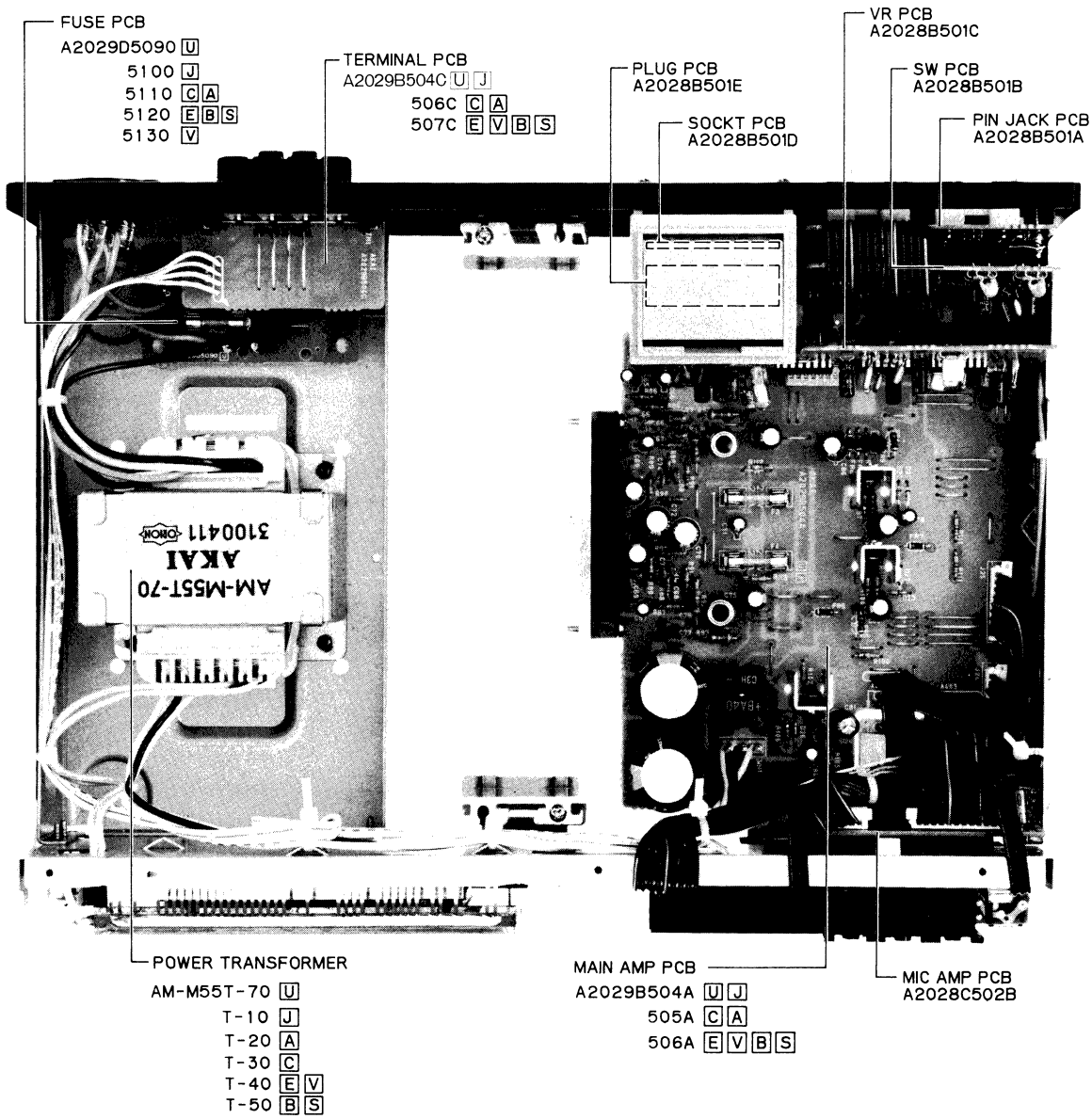


Fig. 4-2 Upper View

V. DESCRIPTION OF THE CIRCUIT OPERATION

5-1. CONTROL OVER INPUT SELECTOR ANALOG SWITCH (TC9164S)

5-1-1. SERIAL DATA STRUCTURE

The serial data employed is a 14-bit data composed of data, CK, and ST arranged in a 3-bit parallel format, and is structured under the system that represents (1) and (0) with data at the upgoing edge of CK and loads it with the rise of ST. Its algorithm is the same as that of electronic potentiometers described later, and because of the arrangement that as long as no ST emerges, none of the transmitted data will be loaded, data and CK used for the analog switch will be in common with those for the potentiometer.

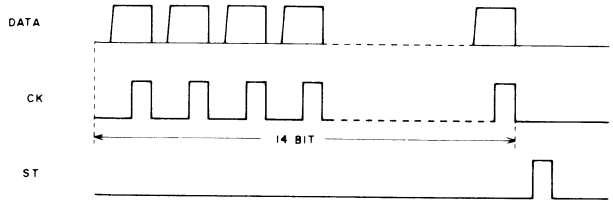


Fig. 5-1

5-1-2. DATA TYPES

Which bits of data will be made (1) is set in MFSRD0 through MFSRD3 of the RAM, and the relevant assignment schedule is as shown in the table below.

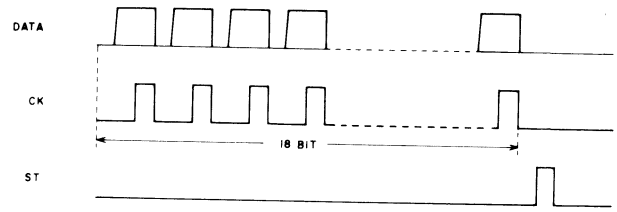
Input Selector	DATA			
	MFSRD3	MFSRD2	MFSRD1	MFSRD0
	AUX, TUNER, PHONO, Not used	TAPE, CD, REC, Not used	L, R	C_1, C_2, C_3, C_4
AUX	1 0 0 0	0 0 1 0	1 1	0 1 0 0
TUNER	0 1 0 0	0 0 1 0	1 1	0 1 0 0
PHONO	0 0 1 0	0 0 1 0	1 1	0 1 0 0
TAPE	0 0 0 0	1 0 0 0	1 1	0 1 0 0
CD	0 0 0 0	0 1 1 0	1 1	0 1 0 0

(A) The bit 0 in MFSRD3 and MFSRD2 will always be sent as (0) because its corresponding switches in the analog switch IC (TC9164S) are as yet unused. The bits 2 and 3 in MFSRD1 will be left blank merely for software reasons, and will not even be transmitted.

5-2. CONTROL OVER ELECTRONIC POTENTIOMETERS (TS9154P AND TC9156P)

5-2-1. SERIAL DATA STRUCTURE

The serial data employed is an 18-bit data composed of data, CK, and ST arranged in a 3-bit parallel format, and its algorithm is identical to that of the analog switch described earlier.



5-2-2. DATA TYPES

Data for the master volume control potentiometer (TC9154P) and the bass/treble control potentiometer (TC9156P) have both been assigned in MVSRD0 through MVSRD4 of the RAM.

a) Master Volume Control (TC9154P)

MVSRD4	MVSRD3	MVSRD2	MVSRD1	MVSRD0
0, 10, 20, 30	40, 50, 60, 0	2, 4, 6, 8	Not used, L	R, C_1, C_2, C_3

C_1=0 C_2=0 C_3=0 Not used=0

(B) The bits 2 and 3 in MVSRD1 will not be transmitted. All data transfers will always be made twice, separately for L and R.

MVSRD4	MVSRD3	MVSRD2	MVSRD1	MVSRD0
+5, +4, +3, +2	+1, Not used, 0, Not used	−1, −2, −3, −4	−5, L	R, C_1, C_2, C_3

BASS	TREBLE
C_1=1	C_1=0
C_2=0	C_2=1
C_3=0	C_3=0

Not used=0

VI. ADJUSTMENT

No Adjustment is necessary for this model.

VII. PC BOARD TITLE AND IDENTFICATIONS

PC BOARD TITLE	PC BOARD NUMBER	REMARKS
MAIN AMP PC BOARD	A2029B504A	U , J
	505A	C , A
	506A	E , V , B , S
SPEAKER SW PC BOARD	A2029B504B	U , J
	505B	C , A
	506B	E , V , B , S
TERMINAL PC BOARD	A2029B504C	U , J
	506C	C , A
	507C	E , V , B , S
FUSE PC BOARD	A2029D5090	U
	5100	J
	5110	C , A
	5120	E , B , S
	5130	V
PIN JACK PC BOARD	A2028B501A	
SW PC BOARD	501B	
VR PC BOARD	501C	
SOCKET PC BOARD	501D	
PLUG PC BOARD	501E	
JACK PC BOARD	502A	
MIC AMP PC BOARD	502B	

SECTION 2

PARTS LIST

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2. PRE AMP P.C BOARD BLOCK 14
3. FLD P.C BOARD BLOCK 14
4. MIC AMP P.C BOARD BLOCK 14
5. FUSE P.C BOARD BLOCK 14
6. ASSEMBLY BLOCK 15
7. FINAL ASSEMBLY BLOCK 16
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Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure

This number corresponds with the Figure Number

b) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T2 6
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T2 6
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

SP (Service Parts) Classification

This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

REF. NO.	PARTS NO.		DESCRIPTION
1	BT-349419		⚠ TRANS POWER AM-M55T-10 (J)
2	BT-349404		⚠ TRANS POWER AM-M55T-20 (A)
3	BT-349420		⚠ TRANS POWER AM-M55T-30 (C)
4	BT-349405		⚠ TRANS POWER AM-M55T-40 (E,V)
5	BR-349406		⚠ TRANS POWER AM-M55T-50 (B,S)
6	BT-349418		⚠ TRANS POWER AM-M55T-70 (U)
7	ED-200213		D SILICON DBA40C-K15 200/2.6A
8	ED-348990		D SILICON H DS446
9	ED-301911		D SILICON H DS448
10	ED-330218	N	D ZENER H HZ15L 2
11	ED-346579	N	D ZENER H HZ24L 3
12	ED-346448	N	D ZENER H HZ6FA F10 A2
13	ED-343410	N	D ZENER H HZ6L A1
14	ED-351418		D ZENER H HZ7L B1
15	EF-602550		⚠ FUSE SEMKO T 250V 1.25A
16	EF-601301		⚠ FUSE SEMKO T 250V 2.00A
17	EF-311839		⚠ FUSE TSC A 250V 1.60A
18	EF-306951		⚠ FUSE TSC A 250V 2.50A
19	EF-326639		⚠ FUSE TSC A 250V 3.15A
20	EF-306956		⚠ FUSE TSC 125V 2.50A
21	EF-323080		⚠ FUSE TSC 125V 3.15A
22	EI-346122		⚠ IC STK4833
23	EI-349395		IC *A2028
24	EI-345765		IC LB1292
25	EI-345479		IC LC7910
26	EI-337228		IC M5218L0
27	EI-349719		IC M5218P
28	EI-344764		IC M5218P-21
29	EI-343371		IC TC9154P
30	EI-343373		IC TC9156P
31	EI-349392		IC TC9164N
32	EI-330256		OSC CE F85-006 4MHz
33	EJ-349415		PHONE J 2P HSJ0842-210 3.5 1C
34	EJ-349390		PHONE J 2P HSJ0944-040 3.5 2T
35	EJ-349391		PHONE J 3P HSJ0942-040 3.5
36	EJ-336905		PIN J AJC-035-ACB P 4P
37	EJ-336915		PIN J AJC-054-ABB P 4P
38	EJ-350918		PLUG CONNECTER M1690 12P
39	EJ-351021		SOCKET CONNECTER M1688 12P
40	EM-349394		IND FL BG-213ZK DOUBLE
41	ER-326169		⚠ R FUSE ERD2FC S10 1/4W 22R0G
42	ER-319455	N	R FUSE ERD2FC S10 1/4W 10R0G
43	ER-318248		R FUSE ERD2FC S10 1/4W 47R0G
44	ES-349070		⚠ SW SELECT YKS11-0002 02-4
45	ES-349416		SW PUSH *A2029
46	ES-345470		SW TACT KEC10901
47	ES-336780		SW TACT KHH10902
48	ET-345626		TR 2SA1248 S,T
49	ET-345625		TR 2SC3116 S,T
50	ET-349081		TR 2SC3383 S,T
51	ET-322775	N	TR 2SC536K-NP E,F,G
52	ET-328868	N	TR 2SD1012−V G,H
53	ET-318239	N	TR 2SD863 E,F
54	EV-349402		VR SLIDE 30P1SV0C B503

(NOTE: N: NEW PARTS)

1. MAIN P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-1U	BA-A2029A040A	PC MAIN BLK AM-M55(U)(U,J)
1-1C	BA-A2029A040C	PC MAIN BLK AM-M55(C)(C,A)
1-1E	BA-A2029A040D	PC MAIN BLK AM-M55(E)(E,B,S)
1-1V	BA-A2029A040E	PC MAIN BLK AM-M55(V)(V)
	MAIN AMP P.C BOARD	
1-TR4	ET-328868	TR 2SD1012-V G,H
1-TR5	ET-318239	⚠ TR 2SD863 E,F
1-TR6	ET-345625	TR 2SC3116 S,T
1-TR7,8	ET-345626	TR 2SA1248 S,T
1-D20	ED-301911	D SILICON H DS448
1-D21	ED-351418	⚠ D ZENER H HZ7L B1
1-D22,23	ED-330218	⚠ D ZENER H HZ15L 2
1-D24	ED-346579	D ZENER H HZ24L 3
1-D25	ED-200213	⚠ D SILICON DBA40C-K15 200/2.6A
1-D26	ED-348990	⚠ D SILICON H DS446
1-D27	ED-301911	D SILICON H DS448
1-D28	ED-346579	D ZENER H HZ24L 3
1-L10	EO-338420	COIL FIX 2 FL12R202E 202K (V)
1-L11to13	EO-336934	COIL FIX 1 LAL03KH 2R2M (V)
1-L14	EO-337880	COIL FIX 2 202AK-018 2R2K
1-FR3to6	ER-319455	⚠ R FUSE ERD2FC S10 1/4W 10R0G
1-FR7,8	ER-318248	⚠ R FUSE ERD2FC S10 1/4W 47R0G
1-FR9	ER-326169	⚠ R FUSE ERD2FC S10 1/4W 22R0G
1-R92	ER-311685	⚠ R CB H S15 FS RDS 1/2W 4R7J
1-F112	ER-322591	⚠ R CB H S10 FS RDS 1/4W 101J
1-R113	ER-200940	⚠ R CB H S10 FS RDS 1/4W 561J
1-C82,83	EC-349750	C EC V CUT 562M 45.0DC
1-J17,18	EJ-336905	PIN J AJC-035-ACB P 4P
1-F3U	EF-306951	⚠ FUSE TSC A 250V 2.50A (U)
1-F3J	EF-306951	⚠ FUSE TSC A 250V 2.50A (J)
1-F3C	EF-306956	⚠ FUSE TSC 125V 2.50A (C,A)
1-F3E	EF-601301	⚠ FUSE SEMKO T 250V 2.00A (E,V,B,S)
1-F4U	EF-306951	⚠ FUSE TSC A 250V 2.50A (U)
1-F4J	EF-306951	⚠ FUSE TSC A 250V 2.50A (J)
1-F4C	EF-306956	⚠ FUSE TSC 125V 2.50A (C,A)
1-F4E	EF-601301	⚠ FUSE SEMKO T 250V 2.00A (E,V,B,S)
	SPEAKER SWITCH P.C BOARD	
1-SW16	ES-349416	SW PUSH *A2029
	TERMINAL P.C BOARD	
1-L15	EO-342936	COIL BALUN (V)
1-TM1	EJ-349417	TERMINAL LEVER YKD21-0026 4P

2. PRE AMP P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1U	BA-A2028A060C	PC PRE AMP BLK AM-M55(U) (U,J,C,A,E,B,S)
2-1V	BA-A2028A060D	PC PRE AMP BLK AM-M55(V) (V)
	PINJACK P.C BOARD	
2-SW1	ES-345470	SW TACT KEC10901
2-L1to4	EO-336934	COIL FIX 1 LAL03KH 2R2M (V)
2-J1,2	EJ-336915	PIN J AJC-054-ABB P 4P
2-J3to5	EJ-349415	PHONE J 2P HSJ0842-210 3.5 1C
	SWITCH P.C BOARD	
2-IC1	EI-344764	IC M5218P-21
2-IC2	EI-349392	IC TC9164N
2-D7,8	ED-301911	D SILICON H DS448
2-C6	EC-346879	C PP V F05 PP 221J 50DC
2-C10	EC-315770	C EC V F05 SM 1R0M 50DC
2-C12,13	EC-316242	C EC V F05 SM 2R2M 50.0DC
	VOLUME P.C BOARD	
2-IC3	EI-343371	IC TC9154P
2-IC4,5	EI-443375	IC TC9156P
2-IC6	EI-337228	IC M5218L0
2-D1,2	ED-343410	D ZENER H HZ6L A1
2-D3,6	ED-301911	D SILICON H DS448
2-R20,21	ER-200940	R CB H S10 FS RDS 1/4W 561J
2-C29	EC-349083	C STY V CUT CQ09S2B 101J 125DC
	SOCKET P.C BOARD	
2-J28	EJ-351021	SOCKET CONNECTER M1688 12P
	PLUG P.C BOARD	
2-J29	EJ-350918	PLUG CONNECTER M1690 12P

3. FLD P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
3-1	BA-A2028A080B	PC FLD BLK AM-M55 (U)
	FLD P.C BOARD	
3-IC9	EI-349395	IC *A2028
3-IC10	EI-345479	IC LC7910
3-IC11	EI-345765	IC LB1292
3-TR2,3	ET-322775	TR 2SC536K-NP E,F,G
3-D10to16	ED-301911	D SILICON H DS448
3-D17	ED-346448	D ZENER H HZ6FA F10 A2
3-SW2to15	ES-336780	SW TACT KHH10902
3-VR1	EV-349402	VR SLIDE 30P1SV0C B503
3-X1	EI-330256	OSC CE F85-006 4MHz
3-SR1	EH-349396	COMP R EXB-EQ7 472J
3-SR2	EH-349397	COMP R EXB-EQ6 104J
3-SR3	EH-349398	COMP R EXB-EQ4 472J
3-SR4	EH-349399	COMP R EXB-EQ8 104J
3-R75,76	ER-354396	⚠ R CB H FS RDS 1/4W 560J (C)
3-C50	EC-344157	C DOUBLE LAYER 473Z 5.5DC
3-IND	EM-349394	IND FL BG-213ZK DOUBLE

4. MIC AMP P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
	JACK P.C BOARD	
4-L5	EO-338420	COIL FIX 2 FL12R202E 202K (V)
4-L6,7	EO-336934	COIL FIX 1 LAL03KH 2R2M (V)
4-J11	EJ-349390	PHONE J 2P HSJ0944-040 3.5 2T
4-J12,13	EJ-349391	PHONE J 3P HSJ0942-040 3.5
	MIC AMP P.C BOARD	
4-IC8	EI-349719	IC M5218P
4-TR1	ET-349081	TR 2SC3383 S,T
4-R54	ER-313699	⚠ R OMF H FS 2W 221J

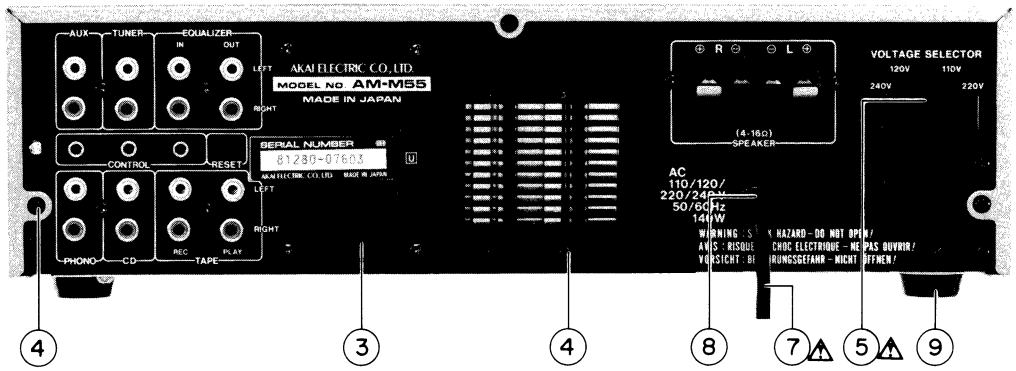
5. FUSE P.C BOARD BLOCK

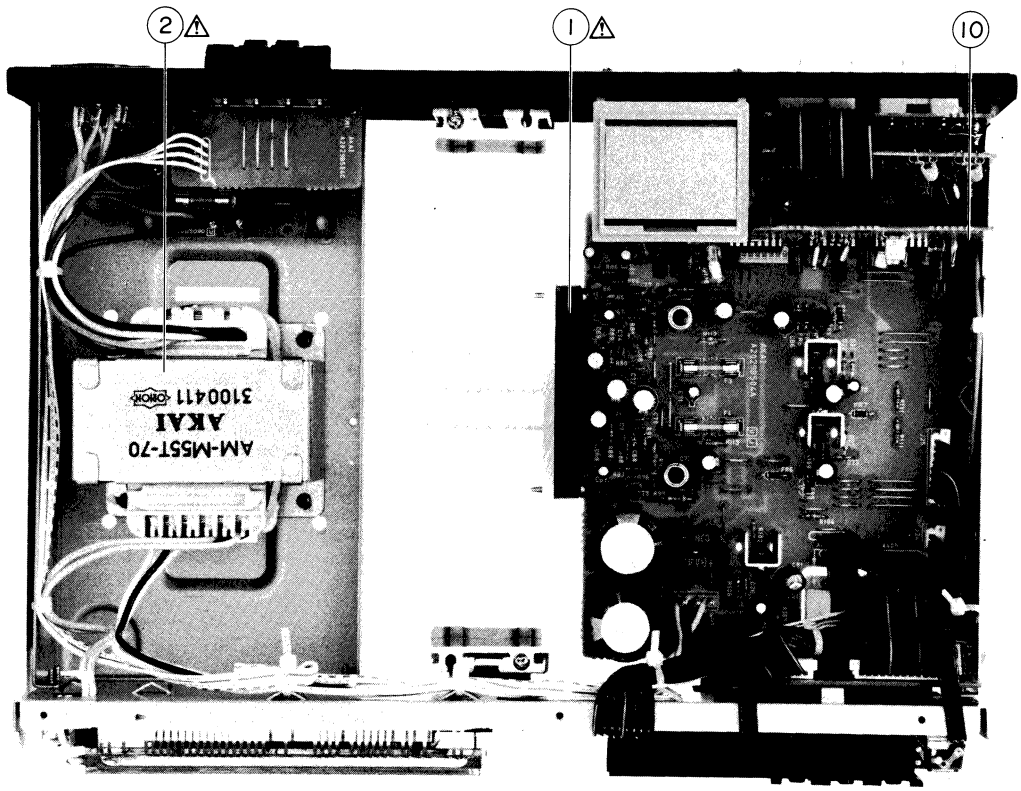
REF. NO.	PARTS NO.	DESCRIPTION
5-FL1	EO-338409	COIL LF FKOB160MH02 250UH (V)
5-F1U	EF-311839	⚠ FUSE TSC A 250V 1.60A (U)
5-F1J	EF-326639	⚠ FUSE TSC A 250V 3.15A (J)
5-F1C	EF-323080	⚠ FUSE TSC 125V 3.15A (C,A)
5-F1E	EF-602550	⚠ FUSE SEMKO T 250V 1.25A (E,V,B,S)
5-F2U	EF-311839	⚠ FUSE TSC A 250V 1.60A (U)

SYMBOL FOR DESTINATION

A : AAL (U.S.A.)
B : UK (England)
C : CSA (Canada)
J : JPN (Japan)
S : SAA (Australia)
U : U/T (Universal Area)
E : CEE (Europe)
V : VDE (West Germany)

ASSEMBLY BLOCK



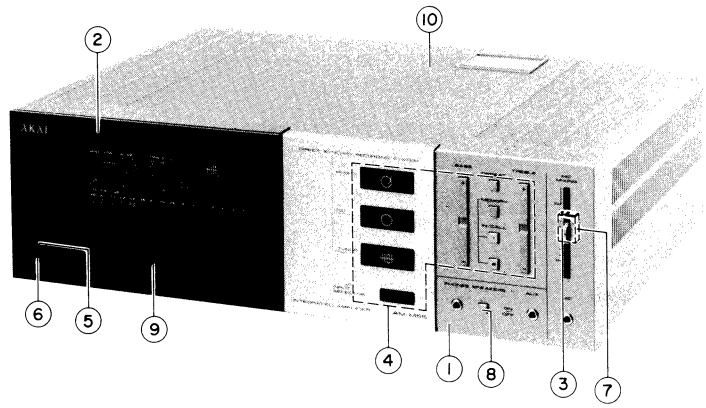


6. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	EI-346122	⚠ IC STK4833 (IC901)
6-2U	BT-349418	⚠ TRANS POWER AM-M55T-70(U) (T901)
6-2J	BT-349419	⚠ TRANS POWER AM-M55T-10(J) (T901)
6-2C	BT-349420	⚠ TRANS POWER AM-M55T-30(C) (T901)
6-2A	BT-349404	⚠ TRANS POWER AM-M55T-20(A) (T901)
6-2E	BT-349405	⚠ TRANS POWER AM-M55T-40 (E,V) (T901)
6-2B	BT-349406	⚠ TRANS POWER AM-M55T-50 (B,S) (T901)
6-3U	SP-350887F	PANEL REAR AM-M55 (U)
6-3J	SP-350887K	PANEL REAR AM-M55 (J)
6-3C	SP-350887J	PANEL REAR AM-M55 (C,A)
6-3E	SP-350887G	PANEL REAR AM-M55 (E,V)
6-3B	SP-350887H	PANEL REAR AM-M55 (B,S)

REF. NO.	PARTS NO.	DESCRIPTION
6-4	ZS-308846	T2BR30x08STL BZN PROJECTION
6-5	ES-349070	⚠ SW SELECT YKS11-0002 02-4 (U) (SW901)
6-6x	EJ-301513	⚠ SOCKET INLET S-16453 E 2P (E,B)
6-7U	EW-349434	⚠ AC CORD 2 CORES KP-224, VFF AM-7 U/T (U)
6-7J	EW-349435	⚠ AC CORD 2 CORES KP-224, VFF AM-7 J (J)
6-7C	EW-352237	⚠ AC CORD 2 CORES KP-8, SPT-2 UC (C)
6-7A	EW-305691	AC CORD 2 CORES KP-8, SPT-1 UC *(A)
6-8	EZ-631945	STRAIN RELIEF SR-4N-4 (U,J,C,A)
6-9	SA-202118	FOOT
6-10	ZW-698308	RV NYL30x055 BL
6-11x	ZW-305013	RV P0P32 (A)

FINAL ASSEMBLY BLOCK



7. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
7-1U	BD-A2029A030A	PANEL FRONT BLK AM-M55 (U) (U,J,C,E,V,B,S)
7-1A	BD-A2029A030B	PANEL FRONT BLK AM-M55 (A)(A)
7-2	SP-350888	PANEL WINDOW
7-3	SK-350881	KNOB SLIDE (B)
7-4	SA-350885	KNOB RUBBER (UL)
7-5	SK-350883	KNOB SAFETY
7-6	SK-350884	KNOB BALANCE
7-7	SK-350880	HOLDER KNOB
7-8	SK-350877	KNOB PUSH
7-9	EV-349403	VR TACH SENSOR ASSY B153
7-10	SP-350869	COVER UPPER

INDEX

PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
BA-A2028A060C	2-1U	ED-330218	1-D23	EJ-336915	2-J2	ER-354396	3-R76	SP-350869	7-10
BA-A2028A060D	2-1V	ED-343410	2-D1	EJ-336915	2-J1	ES-336780	3-SW2	SP-350887F	6-3U
BA-A2028A080B	3-1	ED-343410	2-D2	EJ-349390	4-J11	ES-336780	3-SW3	SP-350887G	6-3E
BA-A2029A040A	1-1U	ED-346448	3-D17	EJ-349391	4-J12	ES-336780	3-SW4	SP-350887H	6-3B
BA-A2029A040C	1-1C	ED-346579	1-D28	EJ-349391	4-J13	ES-336780	3-SW5	SP-350887J	6-3C
BA-A2029A040D	1-1E	ED-346579	2-D24	EJ-349415	2-J3	ES-336780	3-SW6	SP-350887K	6-3J
BA-A2029A040E	1-1V	ED-348990	1-D26	EJ-349415	2-J4	ES-336780	3-SW7	SP-350888	7-2
BD-A2029A030A	7-1U	ED-351418	1-D21	EJ-349415	2-J5	ES-336780	3-SW8	ZS-308846	6-4
BD-A2029A030B	7-1A	EF-306951	1-F3U	EJ-349417	1-TM1	ES-336780	3-SW9	ZW-305013	6-11x
BT-349404	6-2A	EF-306951	1-F3J	EJ-350918	2-J29	ES-336780	3-SW10	ZW-698308	6-10
BT-349405	6-2E	EF-306951	1-F4U	EJ-351021	2-J28	ES-336780	3-SW11		
BT-349406	6-2B	EF-306951	1-F4J	EM-349394	3-IND	ES-336780	3-SW12		
BT-349418	6-2U	EF-306956	1-F3C	EO-336934	1-L11	ES-336780	3-SW13		
BT-349419	6-2J	EF-306956	1-F4C	EO-336934	1-L12	ES-336780	3-SW14		
BT-349420	6-2C	EF-311839	5-F1U	EO-336934	1-L13	ES-336780	3-SW15		
EC-315770	2-C10	EF-311839	5-F2U	EO-336934	2-L1	ES-345470	2-SW1		
EC-316242	2-C12	EF-323080	5-F1C	EO-336934	2-L2	ES-349070	6-5		
EC-316242	2-C13	EF-326639	5-F1J	EO-336934	2-L3	ES-349416	1-SW16		
EC-344157	3-C50	EF-601301	1-F3E	EO-336934	2-L4	ET-318239	1-TR5		
EC-346879	2-C6	EF-601301	1-F4E	EO-336934	4-L6	ET-322775	3-TR2		
EC-349083	2-C29	EF-602550	5-F1E	EO-336934	4-L7	ET-322775	3-TR3		
EC-349750	1-C82	EH-349396	3-SR1	EO-337880	1-L14	ET-328868	1-TR4		
EC-349750	1-C83	EH-349397	3-SR2	EO-338409	5-FL1	ET-345625	1-TR6		
ED-200213	1-D25	EH-349398	3-SR3	EO-338420	1-L10	ET-345626	1-TR7		
ED-301911	1-D27	EH-349399	3-SR4	EO-338420	4-L5	ET-345626	1-TR8		
ED-301911	1-D20	EI-330256	3-X1	EO-342936	1-L15	ET-349081	4-TR1		
ED-301911	2-D8	EI-337228	2-IC6	ER-200940	1-R113	EV-349402	3-VR1		
ED-301911	2-D3	EI-343371	2-IC3	ER-200940	2-R20	EV-349403	7-9		
ED-301911	2-D4	EI-343373	2-IC4	ER-200940	2-R21	EW-305691	6-7A		
ED-301911	2-D5	EI-343373	2-IC5	ER-311685	1-R92	EW-349434	6-7U		
ED-301911	2-D6	EI-344764	2-IC1	ER-313699	4-R54	EW-349435	6-7J		
ED-301911	2-D7	EI-345479	3-IC10	ER-318248	1-FR7	EW-352237	6-7C		
ED-301911	3-D10	EI-345765	3-IC11	ER-318248	1-FR8	EZ-631945	6-8		
ED-301911	3-D11	EI-346122	6-1	ER-319455	1-FR3	SA-202118	6-9		
ED-301911	3-D12	EI-349392	2-IC2	ER-319455	1-FR4	SA-350885	7-4		
ED-301911	3-D13	EI-349395	3-IC9	ER-319455	1-FR5	SK-350877	7-8		
ED-301911	3-D14	EI-349719	4-IC8	ER-319455	1-FR6	SK-350880	7-7		
ED-301911	3-D15	EJ-301513	6-6x	ER-322591	1-R112	SK-350881	7-3		
ED-301911	3-D16	EJ-336905	1-J17	ER-326169	1-FR9	SK-350883	7-5		
ED-330218	1-D22	EJ-336905	1-J18	ER-354396	3-R75	SK-350884	7-6		

AKAI

MODEL AM-M55

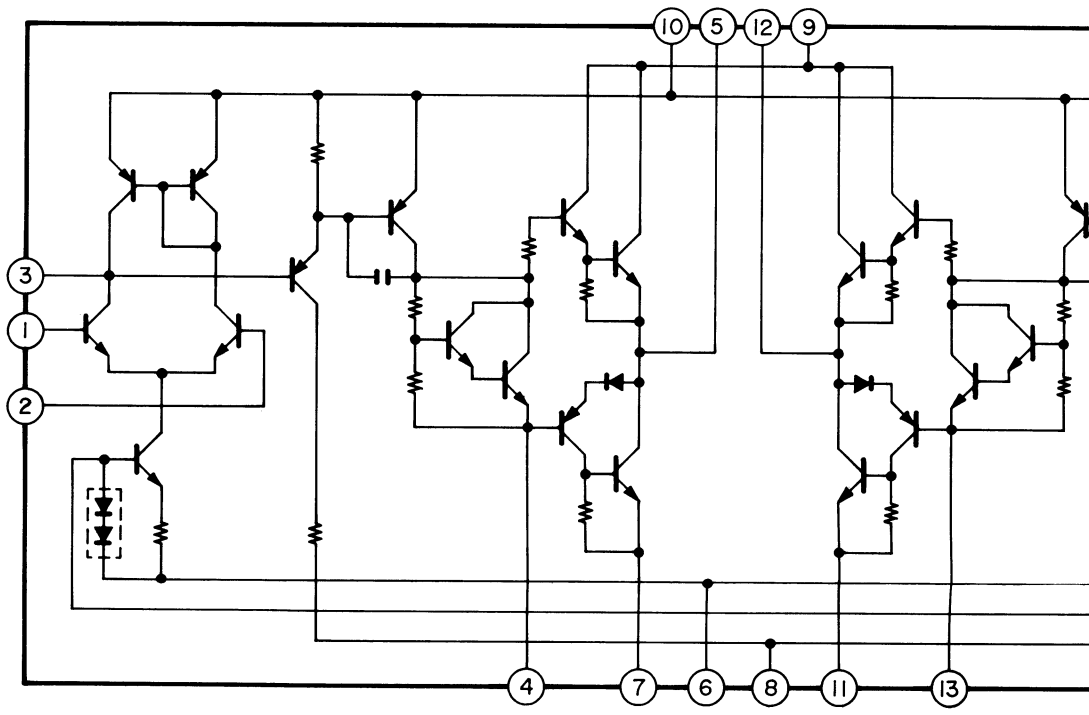
P.C. BOARD
SCHEMATIC DIAGRAM

A2028

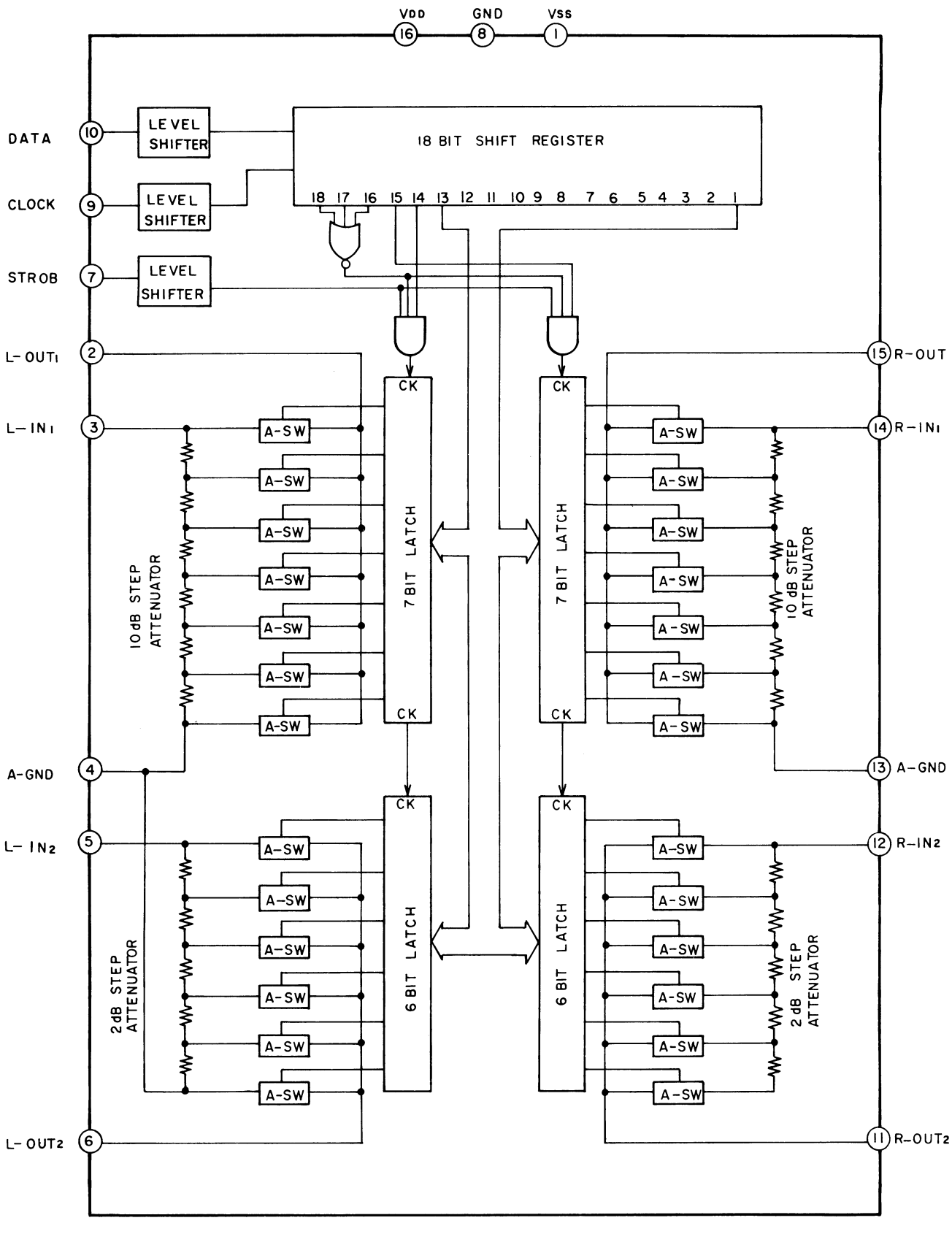
Pin No.	Terminal Description	Function
1	Digit 0	STROB for the Key MATRIX and Dinamic FL Display.
2	Digit 1	
3	Digit 2	
4	Digit 3	
5	Digit 4	
6		Not used
7	Seg. 12	Segment Data for the Dinamic FL Display.
8	Seg. 13	
9	Seg. 0	
10	Seg. 1	
11	Seg. 2	
12	Seg. 3	
13	D	For the Control Data of Input Selector SW (IC TC9164) and Volume Control (IC TC9154P, TC9156P)
14	CK	
15	ST (VR)	STROB for Volume Control STROB
16	ST (SW)	STROB for Input Selector SW control.
17	Seg. 4	Segment Data for the FL Display.
18	Seg. 5	
19	Seg. 6	
20	Seg. 7	
21	V_{SS}	GND

Pin No.	Terminal Description	Function
22	Seg. 8	Segment Data for the FL Display.
23	Seg. 9	
24	Seg. 10	
25	Seg. 11	
26	K0	KEY Matrix IN
27	K1	
28	K2	
29	K3	
30	TEST	
31	X_{IN}	X'tal OSC
32	X_{OUT}	
33	RST	Reset
34	HOLD	HOLD
35		Not used
36	CB out	Common Bus Output
37	CB in	Common Bus Input
38	END	END Detection of the A/D convertor (IC LC7910)
39		Data Detection of A/D convertor (IC LC7910)
40		Command out of Bigining A/D conversion for the A/D convertor
41		Data Receive Clock of the A/D convertor (IC LC7910)
42		

STK4833



TC9154P



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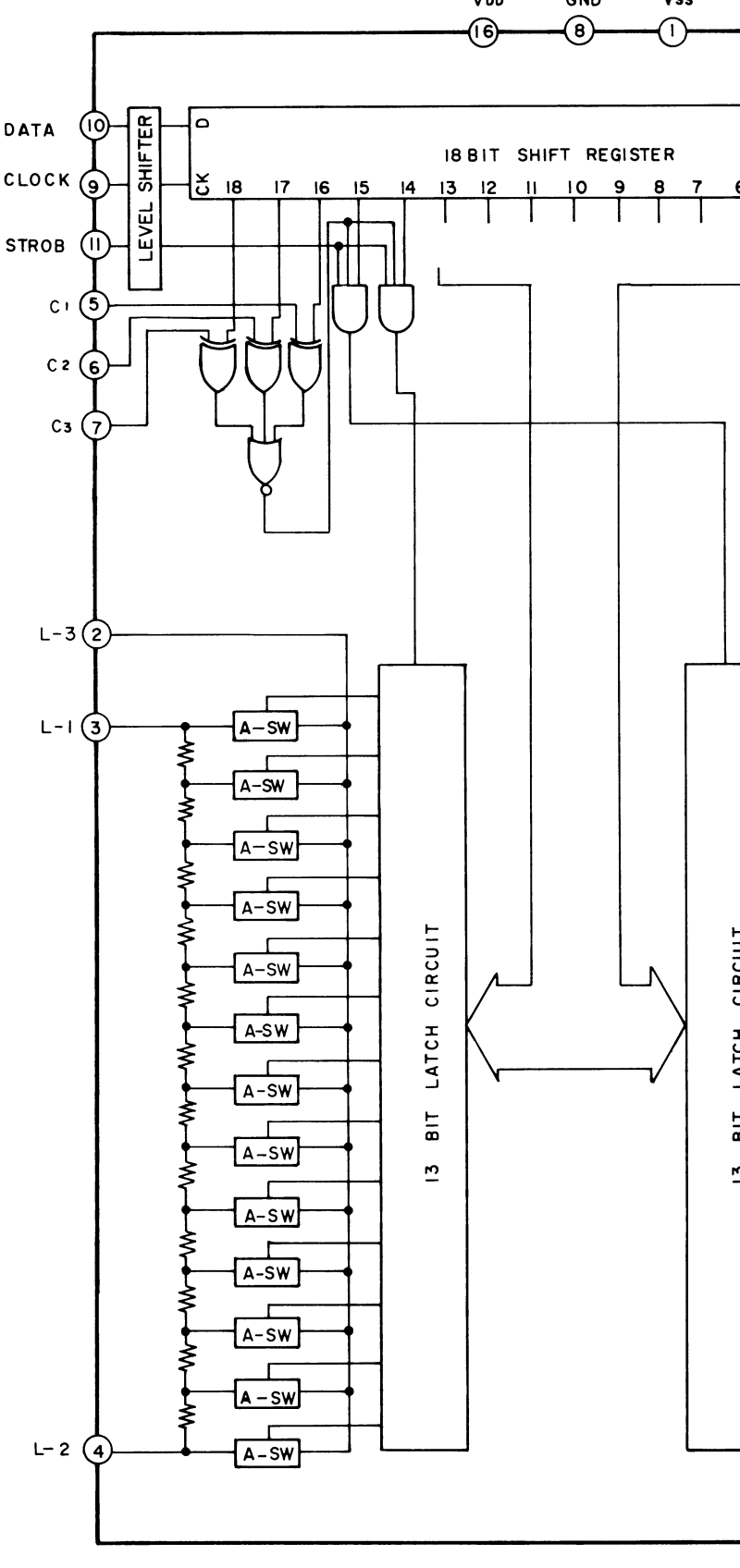
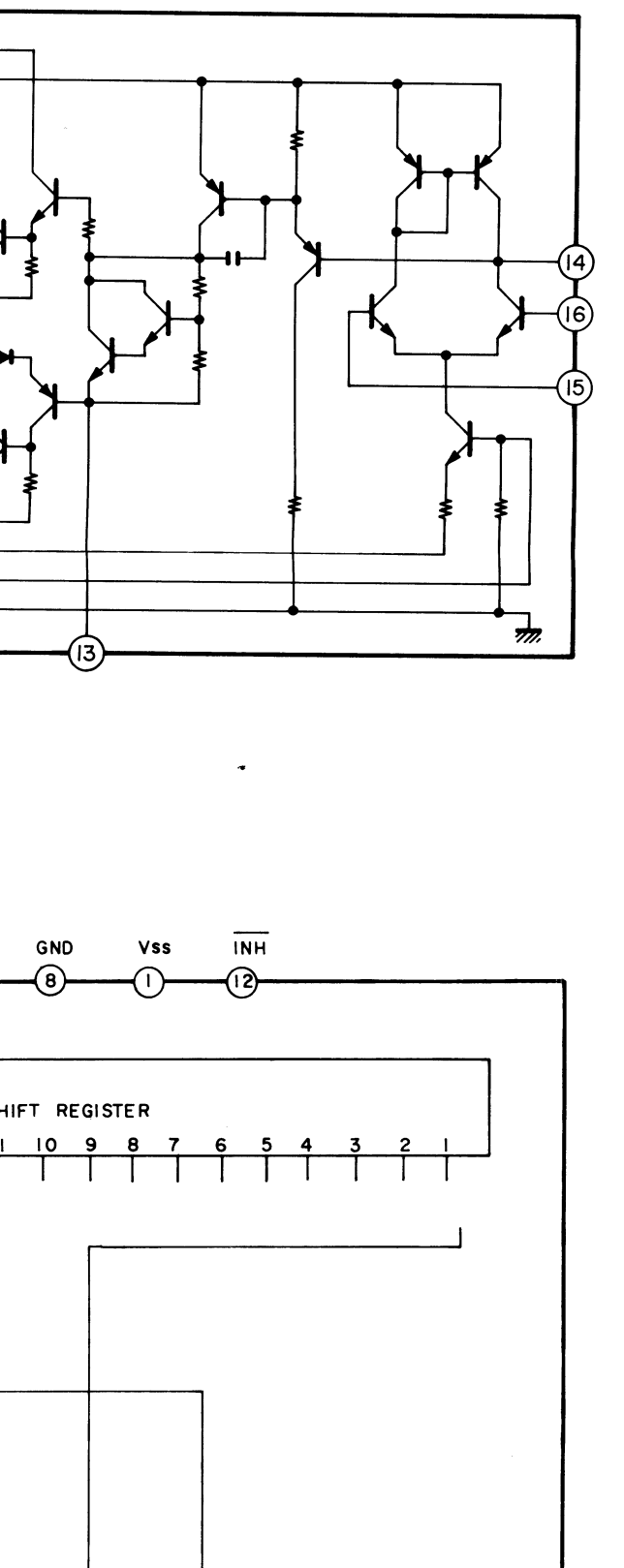
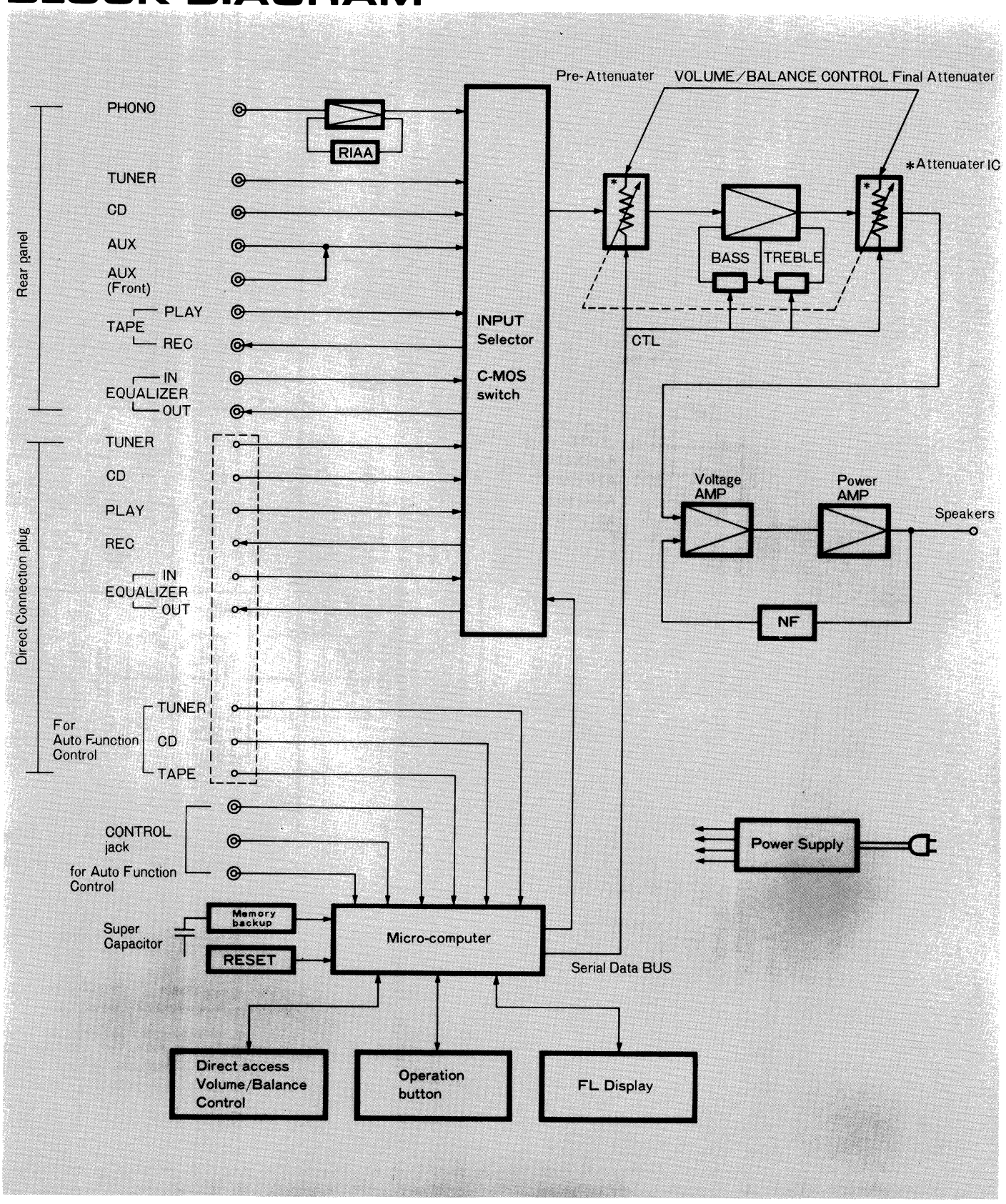
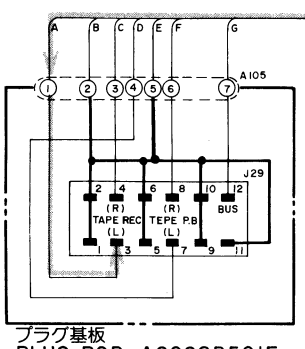




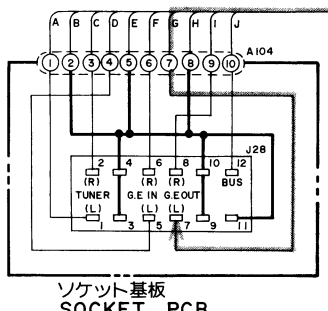
BLOCK DIAGRAM



AM-M55

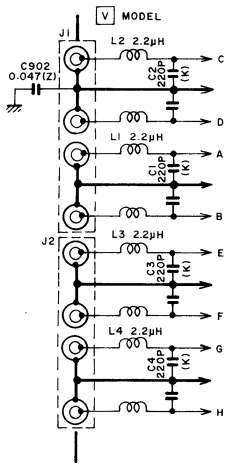


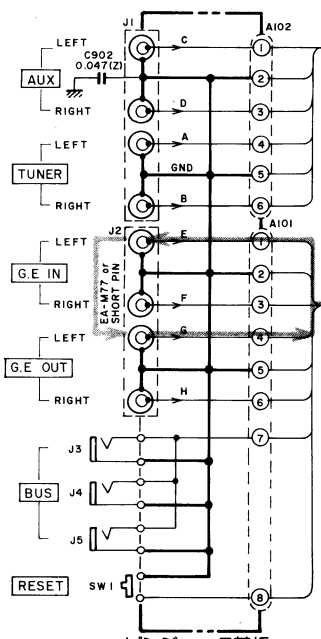
プラグ基板
PLUG PCB A2028B501E



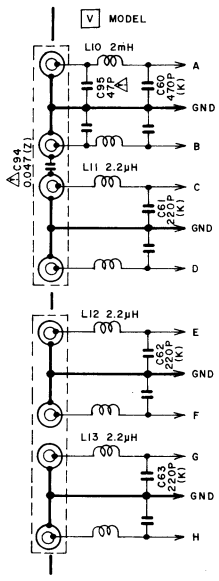
ソケット基板
SOCKET PCB
A2028B501D

スイッチ基板
SW PCB A2028B501B

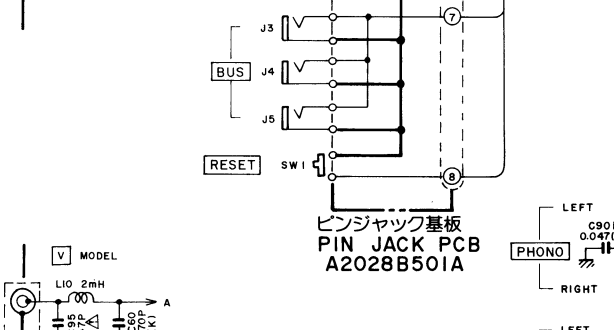




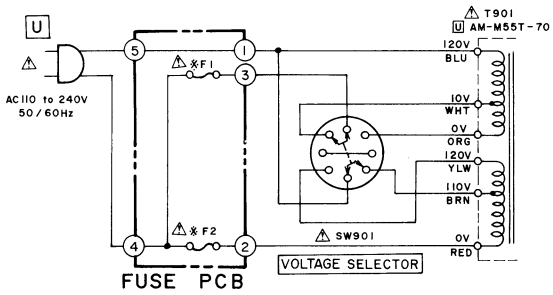
ピンジャック基板
PIN JACK PCB
A2028B501A



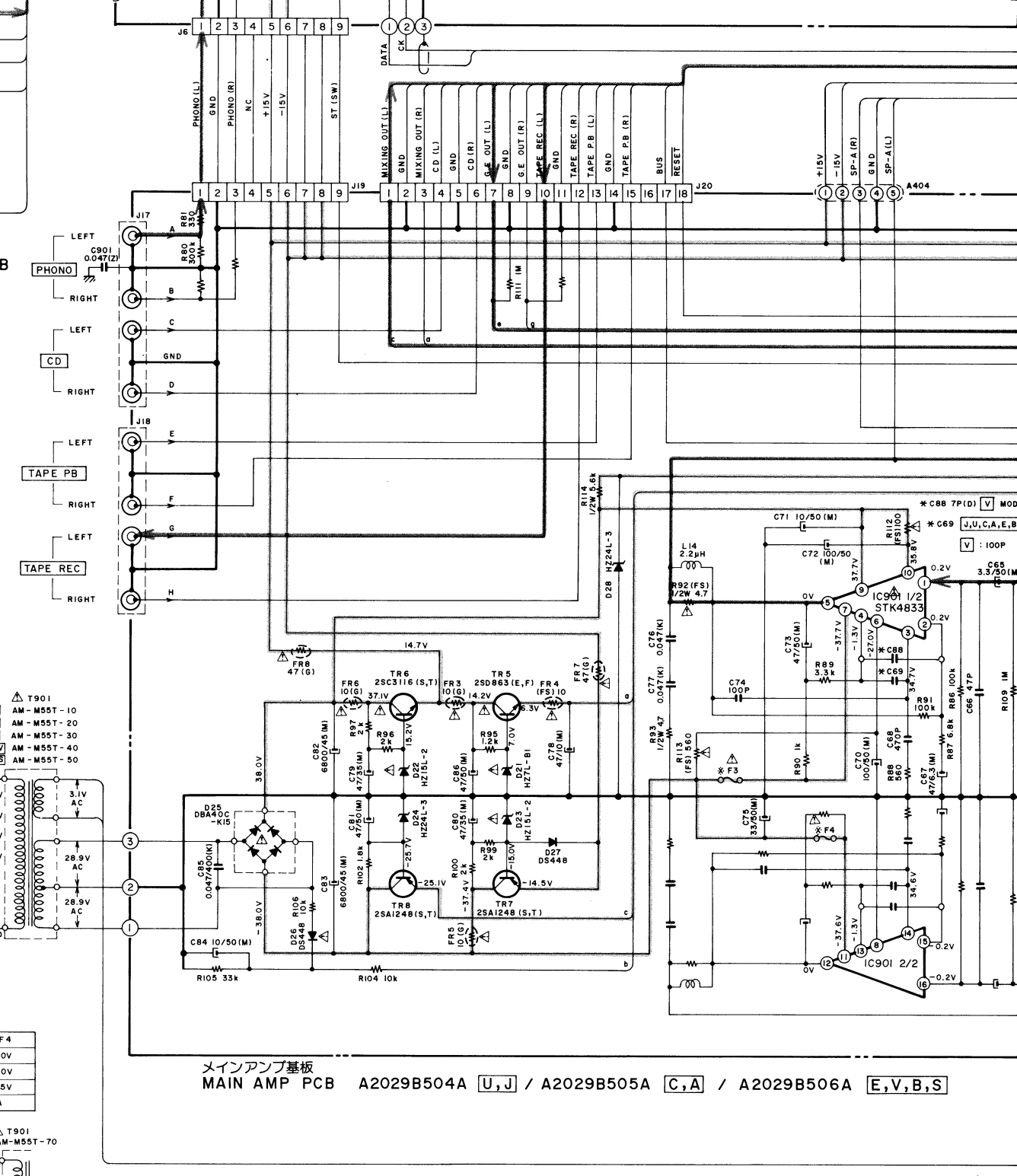
ヒューズ基板
FUSE PCB
A2029D5100 J
A2029D5110 C,A
A2029D5120 E,B,S
A2029D5130 V



※	F1	F2	F3, F4
U	1.6A 250V	1.6A 250V	2.5A 250V
J	3.15A 250V	——	2.5A 250V
C , A	3.15A 125V	——	2.5A 125V
E, V, B, S	1.0A	——	T2A



FUSE PCB
A2029D5090



メインアンプ基板
MAIN AMP PCB A2029B504A U,J / A2029B505A C,A / A2029B506A E,V,B,S

：B電源 B (POWER SUPPLY) LINE
：再生信号系 SIGNAL LINE

INDICATED VOLTAGES ARE MEASURED AT AUX MODE (VOLUME MINI. TONE CONTROL FLAT)

INDICATED SIGNAL LINE IS LEFT CHANNEL ONLY.

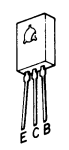
※各部の電圧値は，AUXモードでVR最少，トーンコントロールがフラットの状態です

※信号ラインはPHONOモードで，左チャンネルのみを示します

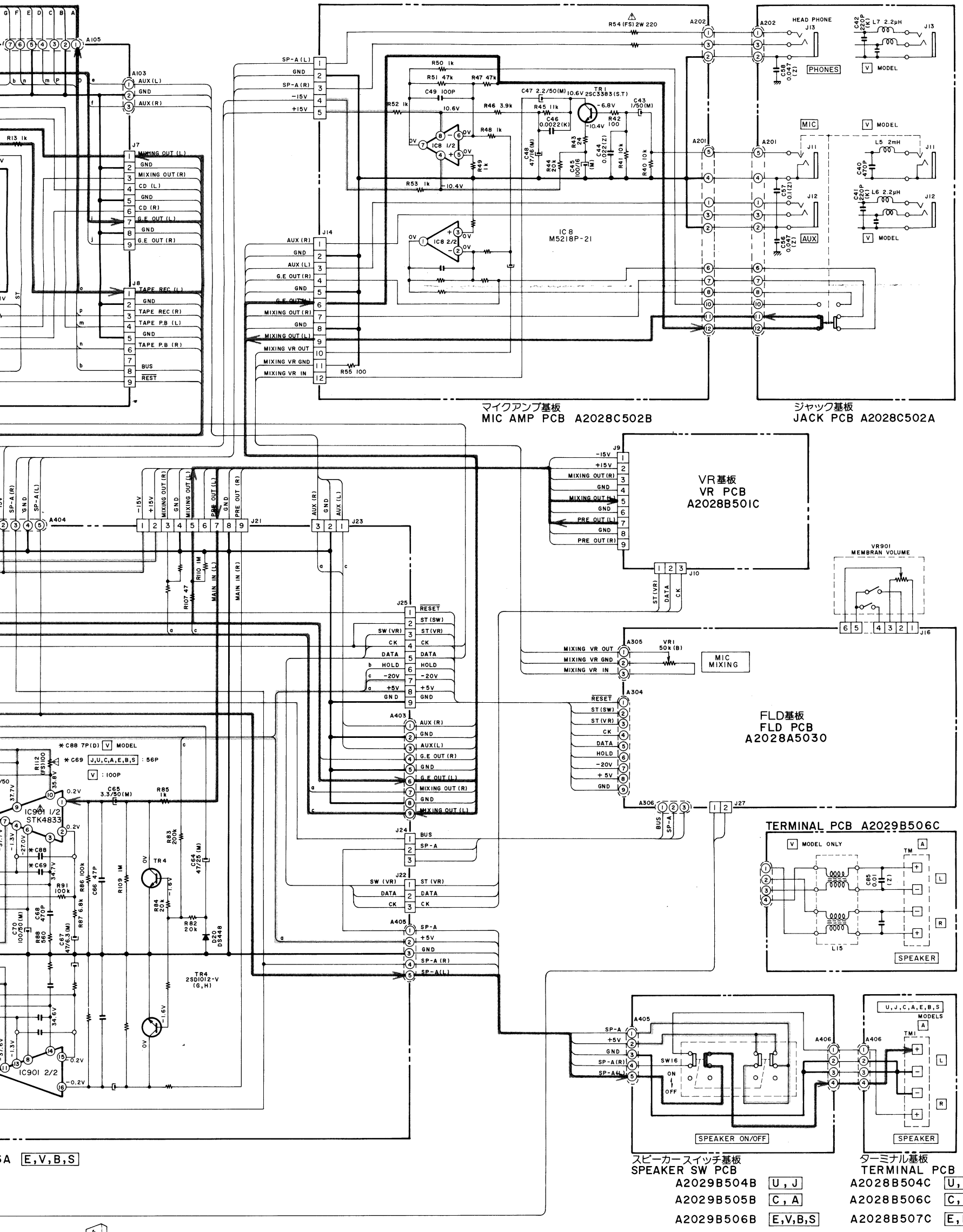
注意：⚠の付された部品は、安全上重要部品です。交換の際は、指定部品以外は使用しないこと。

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ⚠ IL INDIQU LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.



2SA1248
2SC3116



A E,V,B,S

2SA1248
2SC3116

2SD863

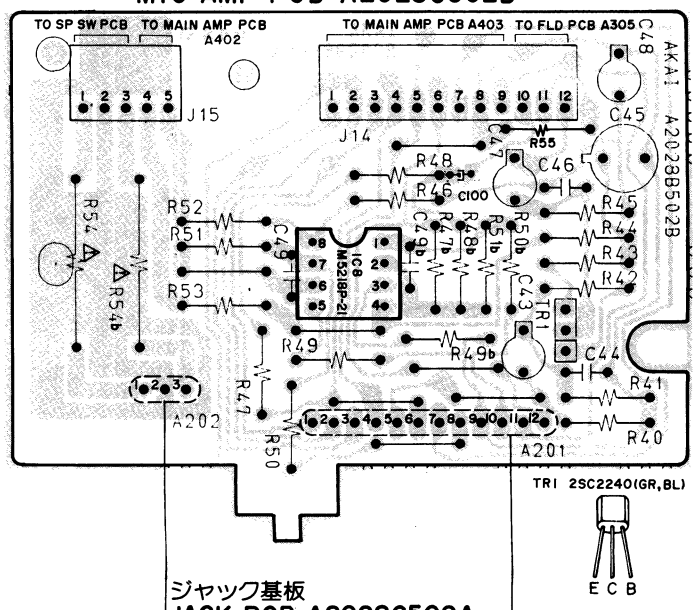
2SC3383
2SD1012V

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
(FS) = FAIL SAFE RESISTORS
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

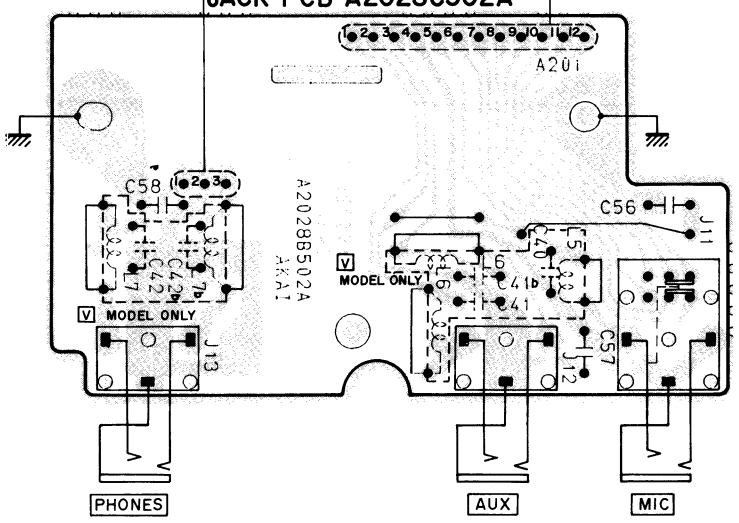
備考
C.Rの単位(特に指定された部品以外)
抵抗……Ω 1/4W(J),(FS)記号は不燃性部品
コンデンサ……μF 50WV(J)
各電圧は、GND間のDC電圧をデジタルボルトメーターにて測定した値です.

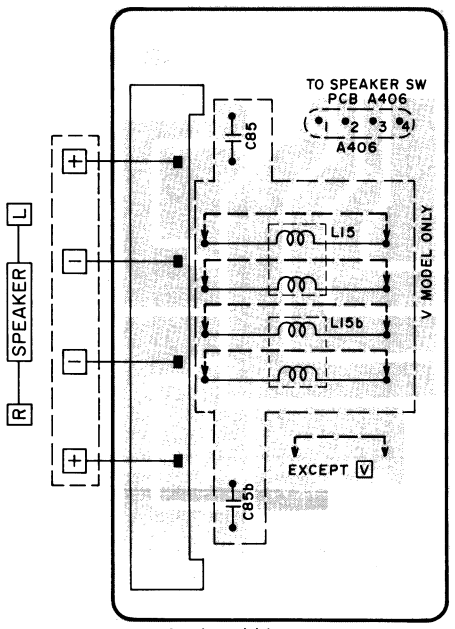
AM-M55
CONNECTION DIAGRAM
NO.2-1 840405A
4C

マイク アンプ基板
MIC AMP PCB A2028C502B

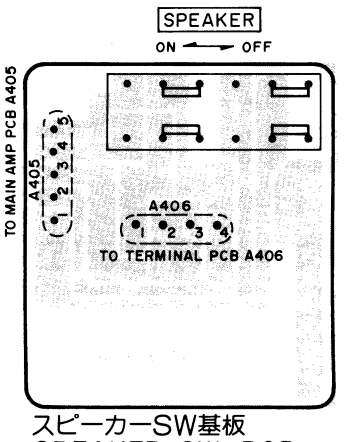


ジャック基板
JACK PCB A2028C502A





ターミナル基板
TERMINAL PCB
A2029B504C J,U
505C C,A
506C E,V,B,S



スピーカーSW基板
SPEAKER SW PCB
A2029B504B J,U
505B C,A
506B E,V,B,S

MAIN AMP PCB A2029B504A U,J
メインアンプ基板 505A C,A
506A E,V,B,S

LOCATION OF COMPONENTS

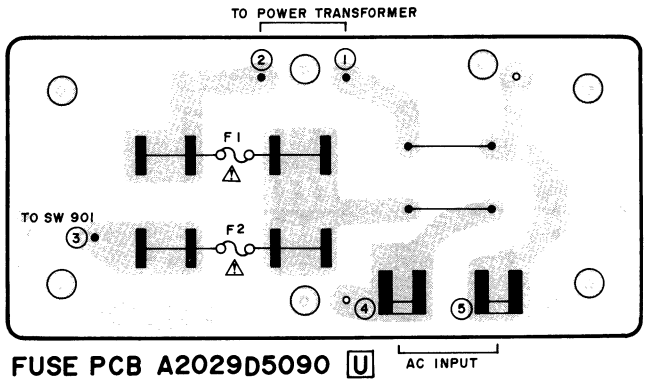
TR
TR4 ----- A1
TR4b ---- A1
TR5 ---- B2
TR6 ---- B2
TR7 ---- B2
TR8 ---- C2

IC
IC601 --- B1

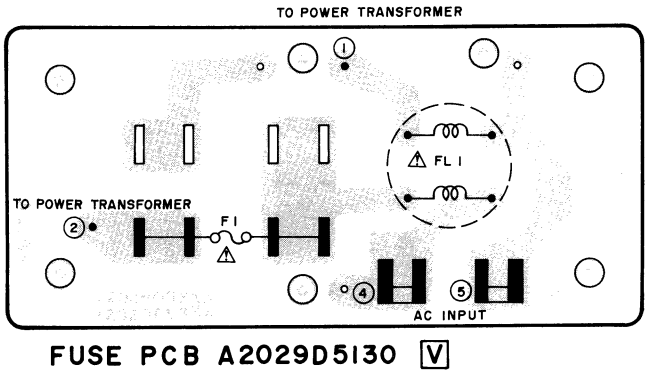
TERMINAL
J19 ----- A2
J20 ---- A2
J21 ---- A2
J22 ---- A2
J23 ---- A2
J24 ---- C2
J25 ---- B2
A403 --- C2
A404 --- C2
A405 --- C2

TR4 --- 2SD1012-V(G,H)
TR5 --- 2SD863(EF)
TR6 --- 2SC3116(S,T)
TR7,8 -- 2SA1248(S,T)

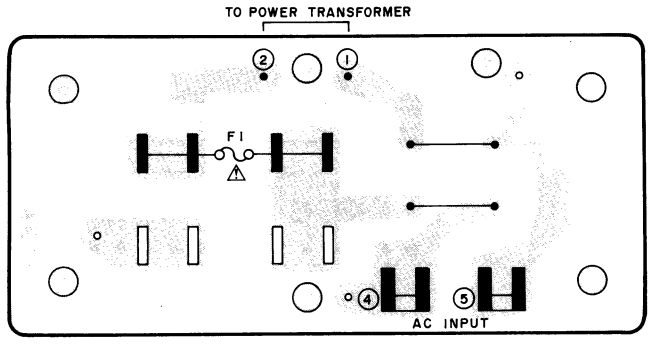
= PNP TRANSISTOR
= NPN TRANSISTOR



FUSE PCB A2029D5090 [U]



FUSE PCB A2029D5130 [V]



FUSE PCB A2029D5100 [J]
ヒューズ基板 5110 [C,A]
5120 [E,B,S]

注意：⚠の付された部品は、安全上重要部品です。交換の際は、指定部品以外は使用しないこと。

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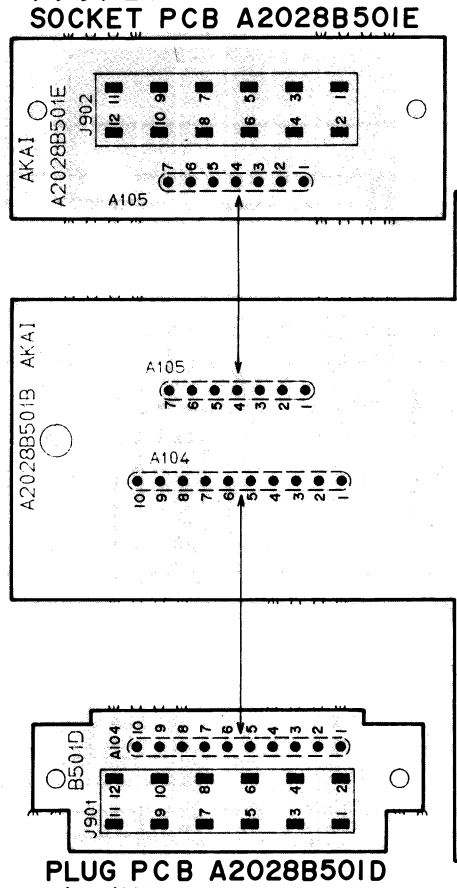
FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

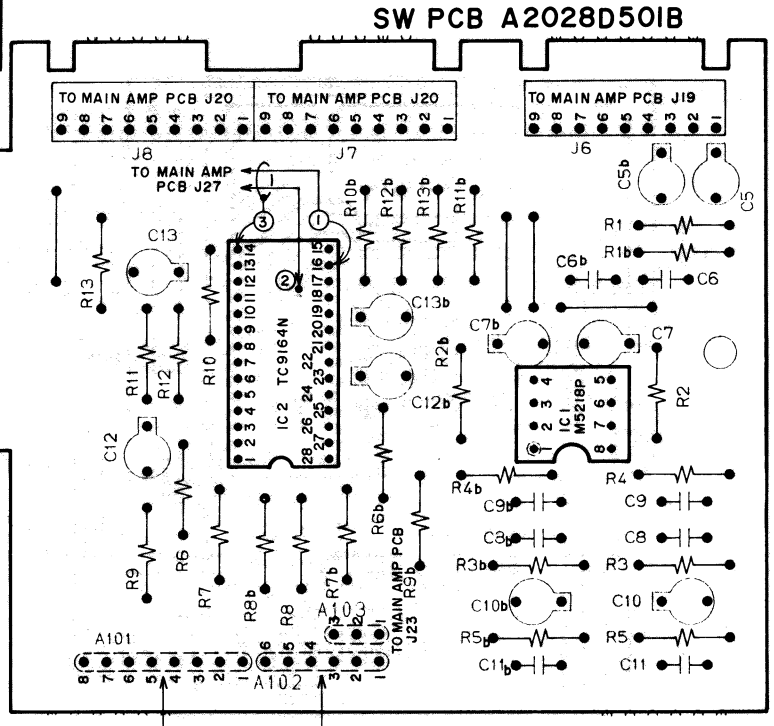
AVERTISSEMENT: ⚠ IL INDIQU LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

ソケット基板
SOCKET PCB A2028B501E

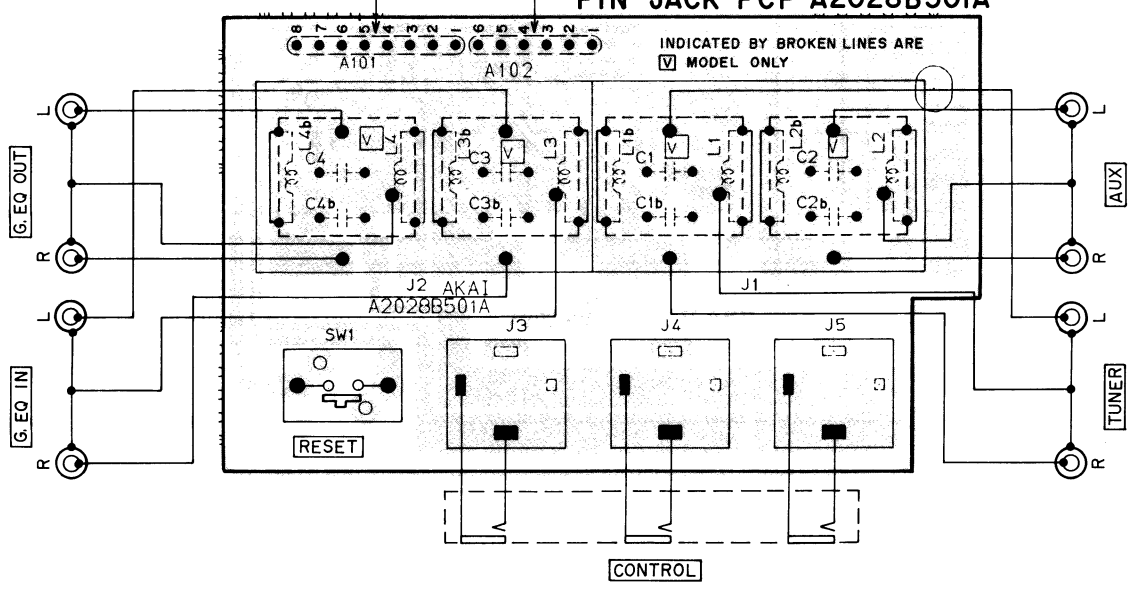


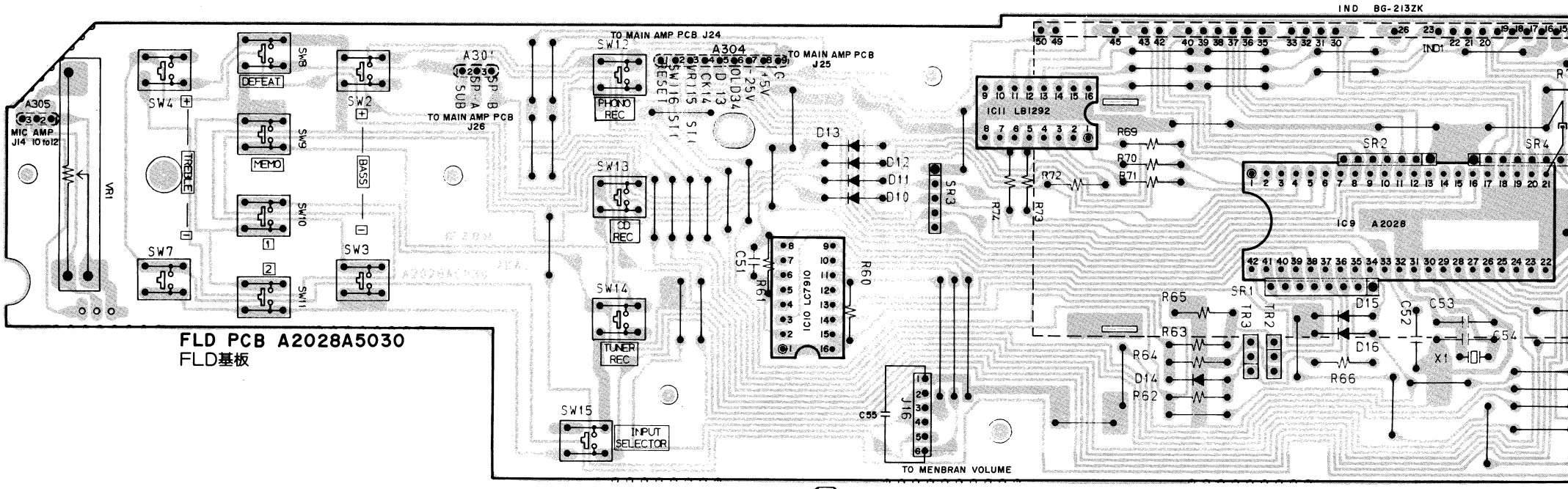
PLUG PCB A2028B501D
プラグ基板

SW基板
SW PCB A2028D501B



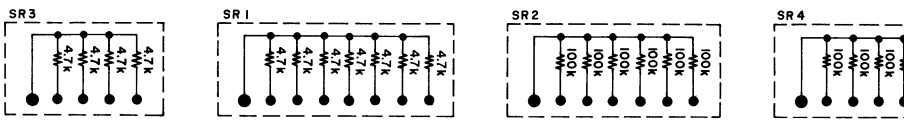
ピンジャック基板
PIN JACK PCP A2028B501A

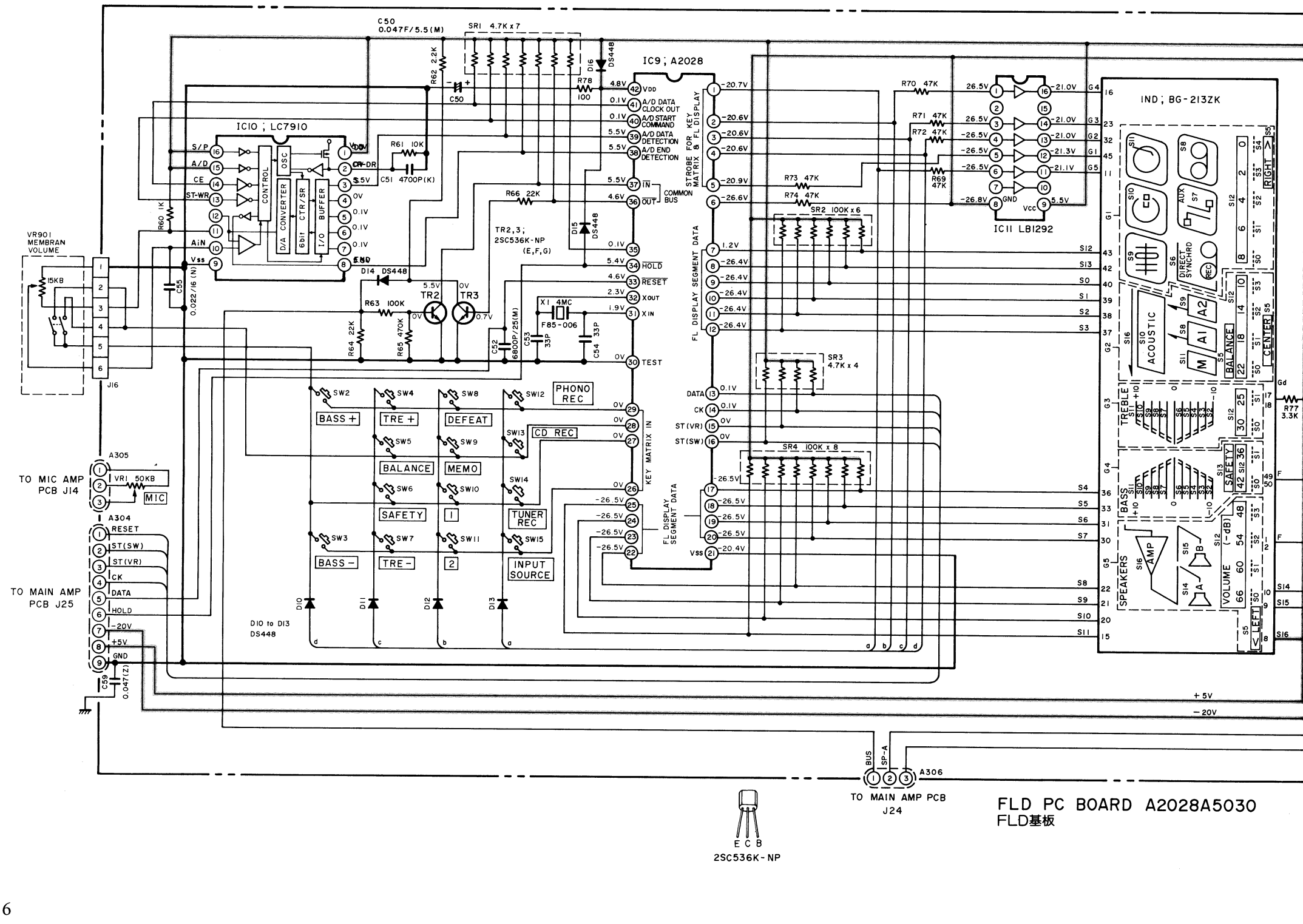




TR2,3 2SC536K-NP

E C B

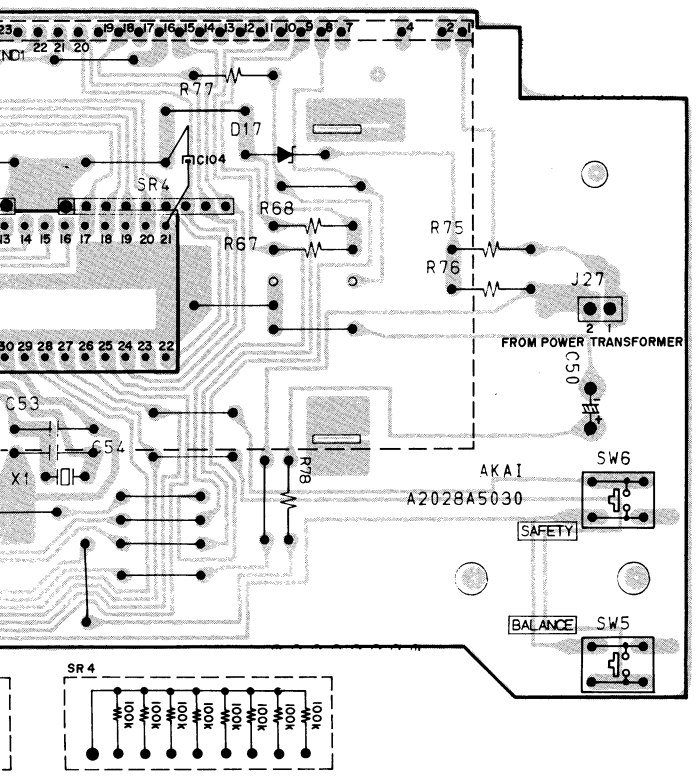


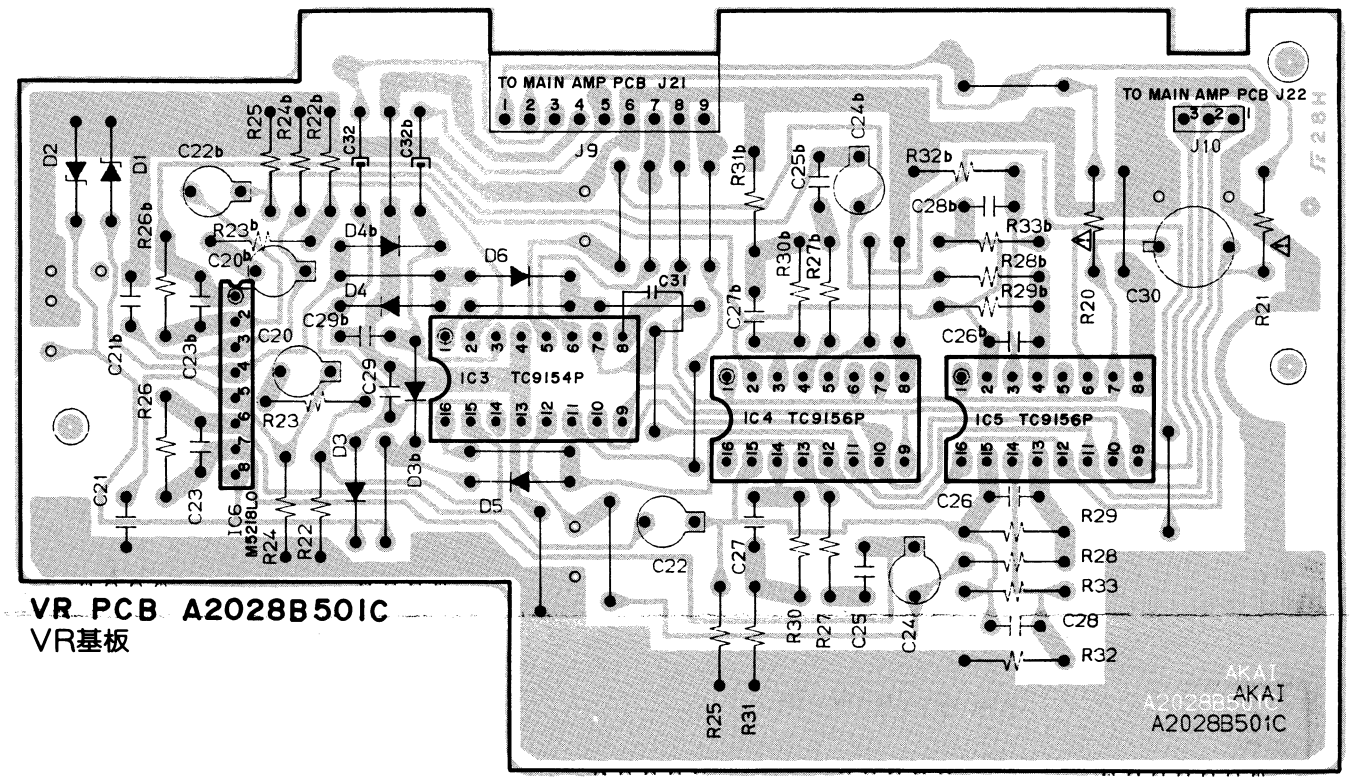


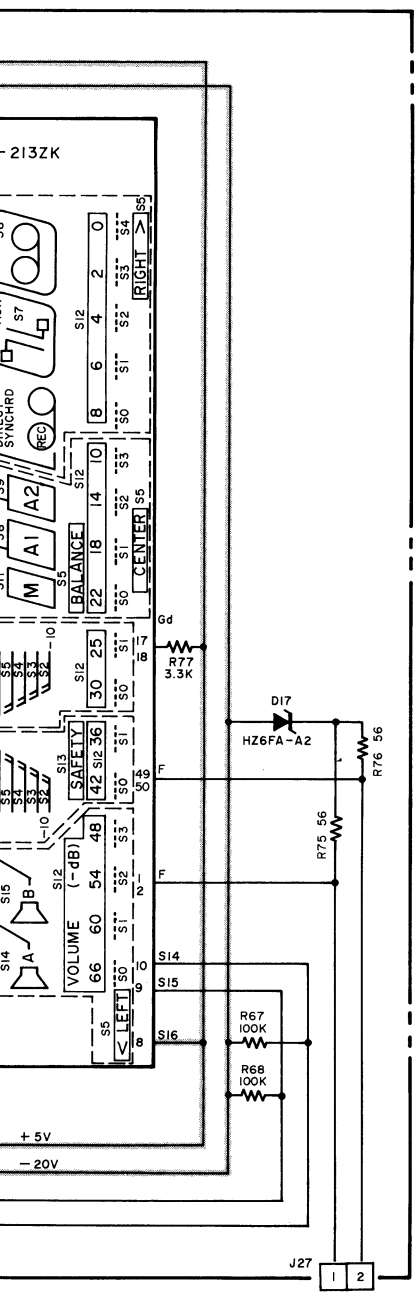
E C B

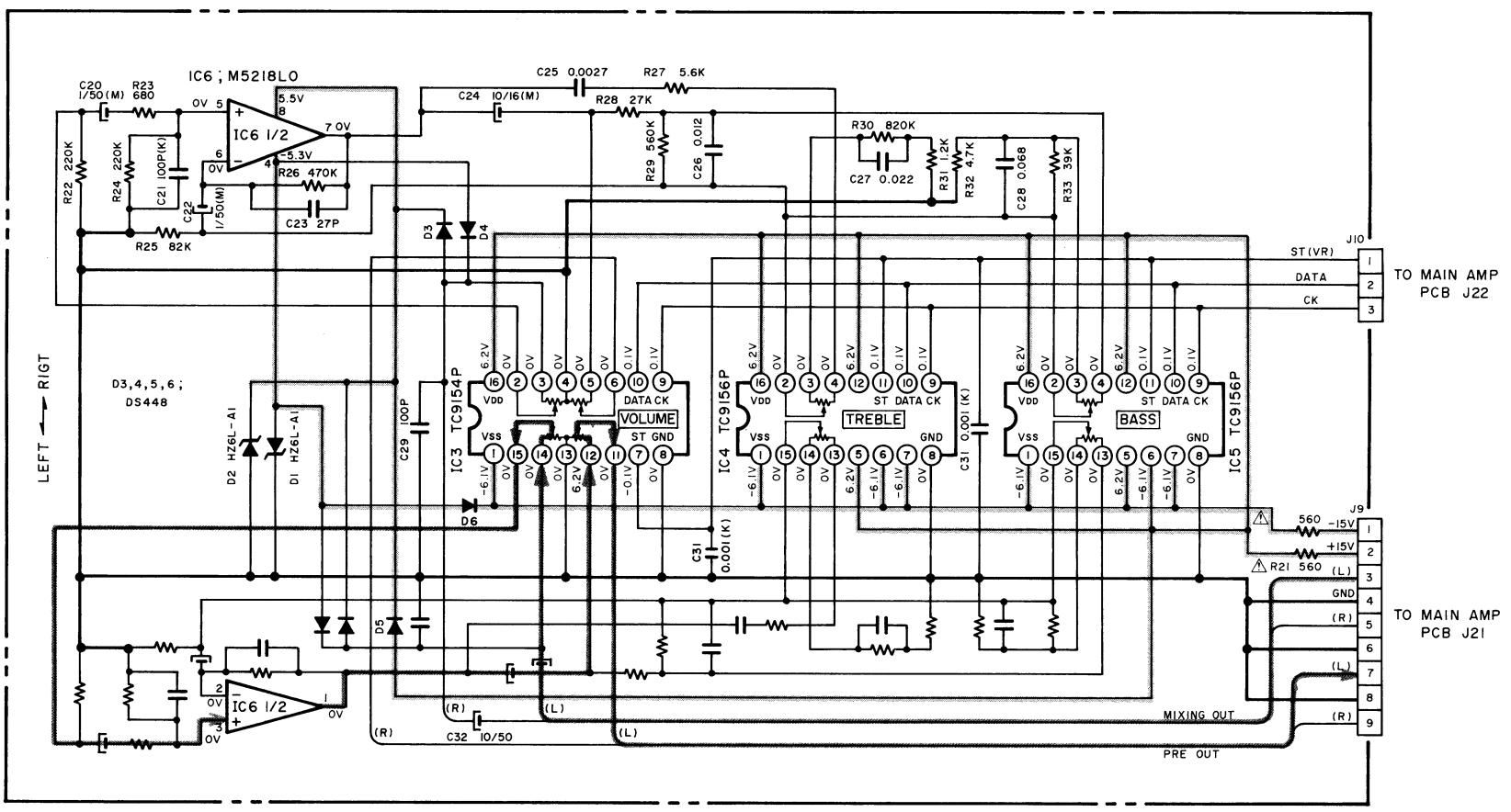
2SC536K-NP

FLD PC BOARD A2028A5030
FLD基板









= B (POWER SUPPLY) LINE ：B電源

NOTE

UNLESS OTHERWISE SPECIFIED
ALL RESISTOR IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

VOLTAGES ARE INDICATED AT AUX MODE.
(VOLUME MINI. AND TONE CONT. FLAT)
SIGNAL LINE IS INDICATED LEFT CHANNEL ONLY AT PHONE MODE

= SIGNAL LINE

備考

C, Rの単位(特に指定された部品以外)
抵抗……Ω 1/4W(J)
コンデンサ……μF 50WV(J)
各電圧は、GND間のDC電圧をデジタルボルトメーターにて測定した値です。

各部の電圧は、AUXモードでボリウム最少、トーンコントロールフラット状態での値です。
信号ラインは、PHONOモードで左チャンネルのみを示します。

VR PC BOARD A2028A501C
VR基板

注意：⚠の付された部品は、安全上重要部品です。交換の際は、指定部品以外は使用しないこと。

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AM-M55 FLD/VR SCHEMATIC DIAGRAM

NO.2-2 840324B
4C

AKAI WERKSTATTHANDBUCH

Da dieses Wartungshandbuch bereits auf Englisch veröffentlicht ist und Einstell- und Zeichnungshinweise auf Deutsch enthält, empfiehlt es sich, diese Ausgabe des Handbuchs zusammen mit der bereits veröffentlichten englischen Ausgabe und den Stromlaufplänen zu verwenden.

INTEGRIETER VERSTÄRKER

MODEL AM-M55/77

I. TECHNISCHE DATEN

Endverstärkerteil

	8 Ohm	6 Ohm	4 Ohm
Nenn-Ausgangsleistung 20Hz bis 20kHz	30W/0,05%	30W/0,08%	
Ausgangsleistung (FTC) 20Hz bis 20kHz	32W/0,05%	33W/0,08%	35W/0,0
1kHz	35W/0,05%	36W/0,05%	38W/0,0
Französicher Standard 63Hz bis 12,5kHz	38W/0,7%		
1kHz	40W/0,7%		
Musikleistung	170W		
Leistungsbandbreite (IHF -3dB, 8 Ohm)	5Hz bis 40kHz (0,1%)		
Rauschabstand (IHF-A) PHONO	70dB		
AUX	92dB		
TAPE	92dB		
MIC	63dB		
Eigenrauschen (8 Ohm)	0,5mV		
Kanaltrennung (IHF, 1kHz)	50dB		
Dämpfungsfaktor (1kHz, 8 Ohm)	35		
Erforderliche Lautsprecherimpedanz USA, Kanada, Europa, GB und Australien	6 bis 16 Ohm		
Andere	4 bis 16 Ohm		

Vorverstärkerteil

Eingangsempfindlichkeit/ Impedanz PHONO	2,5mV/47kohm
AUX	150mV/47kohm
MIC	0,7mV/10kohm
Ausgangspegel/Impedanz TAPE REC	150mV/1,5kohm
Frequenzgang PHONO (RIAA-Abweichung)	20Hz bis 20kHz, ± 0,5dB
TUNER/AUX/TAPE	5Hz bis 80kHz + 0dB, -3dB
Klangregelung BASS	±8dB/100Hz
TREBLE	±8dB/10kHz
Stromversorgung	120V, 60Hz für USA und Kanada 220V, 50Hz für Europa außer GB 240V, 50Hz für GB und Australien 110V/120V/220V/240V, 50/60Hz umschaltbar für andere Länder
Abmessungen	350(B) x 104(H) x 255(T) mm
Gewicht	5,1kg

* Änderungen der technischen Daten zum Zwecke der Verbesserung vorbehalten.

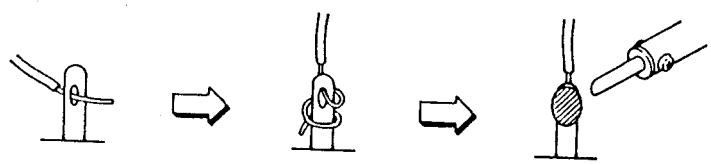
II. SICHERHEITSHINWEISE

SICHERHEITSKONTROLLE NACH WARTUNGSARBEITEN

Sicherstellen, daß der vorgegebene Isolierwinderstand zwischen den Stifen des Netzkabelsteckers und den äußeren, freiliegenden Gehäuseteilen mehr als 10 MOhm beträgt; hingegen soll bei Geräten mit Klemmen für Außenantennen (Tuner, Receiver usw.), die für [C] oder [A] vorgesehen sind, der vorgegebene Isolierwinderstand mehr als 2,2 MOhm (Erdungsklemmen, Mikrophonbuchsen, Kopfhörerbuchsen, (Line-in-out-Buchsen usw.) betragen.

BEI WARTUNGSARBEITEN ZU BEACHTENDE VORSICHTSMASSNAHMEN

1. Bei mit dem Symbol markierten Teilen sind die Sicherheitsvorschriften besonders sorgfältig zu beachten.
   Den Austausch nur gegen Teile mit vorgeschriebener Teilenummer vornehmen.
2. Abgesehen von Sicherheitsmarkierungen werden sonstige Teile und Einheiten spezifiziert im Hinblick auf Übereinstimmung mit Regelungen, wie z.B. für Nebenausstrahlung, auch solche Teile dürfen nur gegen vorgeschriebene Austauschteile ausgetauscht werden.
   Beispiele: Hf-Umsetzer, Tunereinheiten, Antennenwahlschalter, Hf-Kabel, rausch unterdrückende Kondensatoren, rauschunterdrückende Filter usw.
3. Die vorgeschriebene interne Verdrahtung verwenden. Insbesondere auf Folgendes achten:
   1) mit PVC-Kabelschutzrohr versehene Leitungen
   2) doppelt isolierte Leitungen
   3) Hochspannungsleitungen
4. Für Teile, die gefährlich hohe Spannungen führen, nur die vorgeschriebenen Isoliermaterialien verwenden. Dabei ist besonders zu achten auf:
   1) Isolierband
   2) PVC-Kabelschutzrohr
   3) Abstandhalter (Isoliersperren)
   4) Isolierfolien für Transistoren
   5) Plastikschrauben zur Befestigung von Mikroschaltern (insbesondere bei Plattenspielern)
5. Beim Austauschen von Komponenten auf der Netzspannung-Primärseite (Transformatoren, Netzkabel, rauschunterdrückende Kondensatoren usw.) sind die Kabelenden vor dem Verlöten vorschriftsmäßig um die Klemmen zu wickeln.

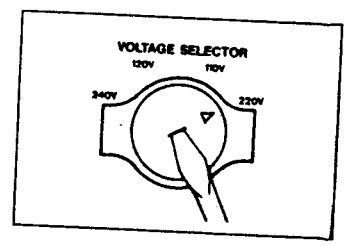


6. Darauf achten, daß Leitungen nicht in Kontakt mit wärmeproduzierenden Teilen geraten (z.B. Kühlkörpern, Metalloxidfolien-Widerständen, unterbrechbaren Wiederstände usw.)
7. Sicherstellen, daß beim Austausch von Leitungen diese nicht in Kontakt mit scharfen Kanten oder spitzen Teilen geraten.
8. Desgleichen die Bereiche in der Umgebung von Stellen, an denen repariert wurde, überprüfen.
9. Darauf achten, daß keine Fremdkörper (Schrauben, Lot usw.) innerhalb des Gerätes verbleiben.

III. SPANNUNGSUMSTELLUNG

3-1 SPANNUNGSUMSTELLUNG

Alle Geräte werden ab Werk dem Bestimmungsort entsprechend eingestellt, einge können jedoch bei Bedarf auf 110V, 120V, 220V oder 240V eingestellt werden.
Falls Ihr Gerat für eine Spannungsumstellung vorgesehen ist: Drehen Sie, vor dem Anschluß des Netzkabels, den Spannungswähler (VOLTAGE SELECTOR) auf der Geräterückseite mit einem Schraubenzieher, bis die korrekte Spannung angezeigt wird.
Modelle für die USA, Europa, kanada und Australien sind nicht mit einem Spannungswähler ausgestattet.



V. SCHALTUNGSBESCHREIBUNG

5-1 STEUERUNG DES ANALOGEINGANGS-WAHLSCHALTERS (TC9164S)

5-1-1. STRUKTUR DER SERIELLEN DATEN

Bei den verwendeten seriellen Daten handelt es sich um 14-Bit Daten, die in einem 3-Bit Parallelformat angeordnet und so organisiert sind, daß (1) (0) an der Anstiegsflanke von CK dargestellt und mit dem Anstieg von ST geladen werden. Sein Algorithmus ist der gleiche wie beim spater beschriebenen elektronischen Potentiometer, und, da die Regelung getroffen ist, daß solange kein ST ausgegeben wird, kein Laden der übertragenen Daten erfolgt, sind die für den Analogschalter verwendeten Daten und CK die gleichen wie für das Potensiometer.

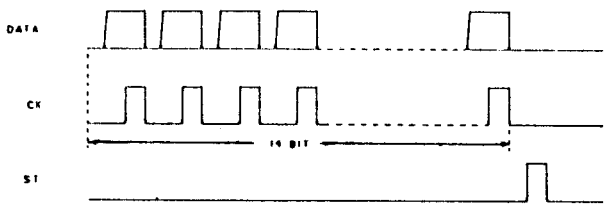


Abb. 5-1

5-1-2 DATENTYPEN

Die Bestimmung, welche Datenbits (1) werden, wird durch MFSRD0 bis MFSRD3 des RAM festgelegt; der relevante Zuweisungsplan entspricht der Darstellung in der nachstehenden Tabelle.

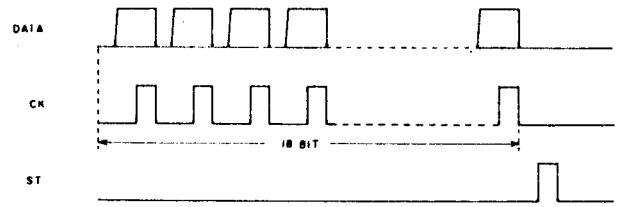
Eingangs-Wahlschalter	DATEN											
	MFSRD3				MFSRD2				MFSRD1		MFSRD0			
	AUX	TUNER	PHONO	Nicht verwendet	TAPE	CD	REC	Nicht verwendet	L	R	C_1	C_2	C_3	C_4
AUX	1	0	0	0	0	0	1	0	1	1	0	1	0	0
TUNER	0	1	0	0	0	0	1	0	1	1	0	1	0	0
PHONO	0	0	1	0	0	0	1	0	1	1	0	1	0	0
TAPE	0	0	0	0	1	0	0	0	1	1	0	1	0	0
CD	0	0	0	0	0	1	1	0	1	1	0	1	0	0

(A) Bit 0 in MFSRD3 und MFSRD2 wird stets als (0) übertragen, da seine zugehörigen Schalter im Analogschalter IC (TC9164S) bisher noch nicht verwendet werden. Die Bits 2 und 3 in MFSRD1 bleiben aus Software-Gründen leer und werden auch nicht übertragen.

5-2 STEUERUNG DES ELEKTRONISCHEN POTENTIOMETERS (TS9154P UND TC9156P)

5-2-1 STRUKTUR DER SERIELLEN DATEN

Bei den verwendeten seriellen Daten handelt es sich um 18-Bit Daten, bestehend aus Daten CK und ST in einem 3-Bit Parallelformat, sein Algorithmus ist mit dem des zuvor beschriebenen Analogschalters identisch.



5-2-2 DATENTYPEN

Sowohl die Daten für das Hauptlautstärkeregler-Potentiometer (TC9154P) als auch die Daten für das Bässe/Höhen-Regler-Potentiometer (TC9156P) sind MVSRD0 bis MVSRD4 dem RAM zugeordnet.

a) Hauptlautstärkeregler (TC9154P)

MVSRD4	MVSRD3	MVSRD2	MVSRD1	MVSRD0
0 10 20 30	40 50 60 0	2 4 6 8	Nicht verwendet L	R C_1 C_2 C_3

C =0 C =0 C =0 Nicht verwendet=0

(B) Die Bits 2 und 3 in MVSRD1 werden nicht übertragen. Alle Datenübertragungen werden für L und R getrennt zweimal ausgeführt.

MVSRD4	MVSRD3	MVSRD2	MVSRD1	MVSRD0
+5 +4 +3 +2	+1 Nicht verwendet 0 Nicht verwendet	-1 -2 -3 -4	-5 L	R C_1 C_2 C_3

BÄSSE HÖHEN
C_1=1 C =0_1
C_2=0 C =1_2
C_3=0 C =0_3
Nicht verwendet=0

VI. EINSTELLUNG

Für dieses Modell ist keine Einstellung erforderlich.